

## CHAPTER IX.

## EDUCATION.

## § 1. Evolution of Educational Systems in Australia.

1. *Educational Systems of the States.*—(i) *Place of New South Wales in Australian Education.* The first settlement in Australia being in New South Wales, it is but natural that Australian education should have had its beginning in that State. In the evolution of educational method and system in Australia, New South Wales also has played a leading part, and has had practically a dominating influence. The subject is dealt with in some detail in No. I. and No. II. issues of the Commonwealth Official Year Book, but it is not proposed to repeat it in the present volume. (See also 2 hereunder.)

(ii) *Educational Systems of other Commonwealth States.* A more or less detailed account of the origin and development of the educational systems of the other States also appears in No. I. and No. II. issues of the Year Book. Later details are given hereunder.

(iii) *Medical Inspection of State School Children.* See Chapter XII. Public Hygiene.

2. *Recent Development in State Educational Systems.*—(i) *New South Wales.* The year 1913 was an important one in New South Wales educational history, in that it was the first complete year of active operation of the principles laid down in the University Amendment Act and the Bursary Endowment Act of 1912. Further reference to these Acts will be made later on. It was also remarkable for the reorganization of technical education on a Trades School basis, and of the Superior Schools on a vocational basis. Reference may also be made to the development of the Evening Continuation Schools established in 1911, and to the wide extension of the scheme of school medical inspection. The full development of this branch of the Department's activities has been hampered by lack of funds, but the travelling hospitals and travelling dental clinics have proved very popular in the country districts. A school clinic, under the direction of Lecturers in Education from the Training College, was opened in the metropolis during 1918. The object of this institution is to examine and to suggest suitable treatment for children reported by their teachers as showing special disabilities for school work.

As pointed out in a preceding Official Year Book (see No. VII., page 765), the Education Department instituted a scheme of examinations in 1911 for what were termed respectively the "qualifying," "intermediate," and "leaving" certificate. The first "qualifying" examination was held in March, 1911, the first "intermediate" in November, 1912, and the first "leaving" in November, 1913. The successful students who were awarded exhibitions at the leaving certificate examinations took up University studies in the first term of 1914, thus marking the definite linking-up of the State School system with the University. In addition to the above-mentioned certificates the Department also grants superior commercial, junior technical, domestic, and evening continuation certificates.

The provisions of the Public Instruction (Amendment) Act of 1916 have exercised a marked influence on attendance, and in many schools the average exceeds 90 per cent. of the effective enrolment. The average for all schools in 1921 was about 85 per cent., which is considered satisfactory in view of the causes militating against full attendance, such as extremes of dry and wet weather and the usual epidemics of children's diseases.

Reference to recent developments in agricultural education will be found in § 2, 4 (v) hereinafter.

In his Report for the year 1921 the Minister again draws attention to the disabilities under which the Education Department was labouring owing to shortage of teachers and lack of necessary funds for new buildings, equipment, and renovations. It is stated that a sum of £1,500,000 is required for urgent works.

(ii) *Victoria*. Under the Education Act of 1915 it is provided that every child must attend school for the full period of eight years between 6 and 14, unless he be given a certificate of education at 13 or is excused on reasonable grounds. The schools are open on an average 225 days in each year, and require attendance on all these days unless satisfactory explanation is forthcoming. Provision is made for the mentally deficient. The primary curriculum divides the school life into eight grades, so that a child entering at six years of age should have completed the full course by the time he reaches his fourteenth year. After completion of the elementary school course, the pupil may go on to the Evening Continuation Schools, Higher Elementary Schools, District High Schools, or the Trade Schools. Special schools for feeble-minded children have been established in the metropolis, and an "open air" school for delicate children is in operation at Blackburn. There is also a special school for epileptics at Clayton. Highly encouraging results have been obtained at all these institutions. A Council of Public Education has been appointed to advise on educational matters generally, and particularly in regard to co-ordination. Examinations are held throughout the State for the certificate of merit and the qualifying certificate. The former is granted to pupils who, under prescribed conditions, reach a satisfactory standard in subjects prescribed for Grade VIII., while the latter is awarded to pupils who reach a satisfactory standard in Grade VI. Possession of this certificate enables the holder to enter upon the work of the Higher Elementary or the District High School. Acting on the advice of the Council of Education, the Melbourne University has established a Schools Board. The function of this body is to consider all questions relating to school studies and the inspection and examination of schools. In addition to University representation, there are also on the Board representatives of the Department of Education, the registered Secondary Schools, and the business interests of the community. Being with wide powers, this Board must of necessity be the chief guiding factor in the development of education in Victoria. During the year 1915 a considerable amount of attention was devoted to the organization of the elementary schools, especially in connexion with the question of retardation, and in regard to the teaching of infants. It is found that the greater flexibility in organization and system of promotions, coupled with special methods of dealing with backward pupils, tends to lower considerably the retardation percentage. The institution of the uniform school year, the greater powers conferred on the head teachers in regard to the promotion of scholars, the making of the inspector an advisory rather than an examining officer, the better provision for the practical training of the junior teachers, and the inauguration of a system of medical and dental inspection have all been fraught with excellent results. During recent years methods of training teachers have been considerably improved. Formerly there was only one course leading to the trained teacher's certificate. At present four courses are provided—primary, secondary, infant, and short course for teachers of rural schools, and special instruction is provided for in particular subjects.

(iii) *Queensland*. The Amending Act of 1910 introduced several new features into the educational system of Queensland, chief amongst them being—(a) employment of proceeds of sales of land and other school property for school purposes, instead of paying them into Consolidated Revenue; (b) abolition of local contributions; (c) provision of scheme of school certificates to assist in co-ordination of various branches of the system; (d) establishment of compulsory continuation classes; (e) compulsory medical and dental examination; (f) raising the compulsory age to 14 years instead of 12 years; (g) provision for compulsory attendance on every day on which the school is open. The last-mentioned provision has already produced good results in regard to improved attendance. The organization of the general scheme of education is being systematically developed. State High Schools were inaugurated in February, 1912, and a more liberal scheme of scholarships to secondary schools came into force in 1913, while further amendments were made in 1914, 1915, and 1918. Rural schools, giving training in useful manual arts, together with elementary agricultural science, date from 1917. (See § 2, 4 (v)). A Teachers' Training College has been established, and greater attention is being given to the development of technical education. Methods of instruction have been brought into consonance with the latest developments, under the new syllabus adopted in 1914. During this year also the medical and dental inspection of State School children were considerably extended. Reference to the system adopted in connexion with the choice of entrants to the teaching profession will be found in § 2, 6.

(iv) *South Australia.* The chief features of the year 1921 were (a) the issue of a new course of instruction for primary schools, and (b) the inception of new methods in regard to the training, examination, and classification of teachers. With respect to (a), the course of instruction was compiled by a body consisting of about twenty selected teachers, the inspectors, and the members of the Curriculum Board in conjunction with the Superintendent of Primary Education and the Director. The new syllabus shortens the time spent by an average child in the primary schools from eight to seven years, and is designed to show the scope and nature of the studies and the character of the training for each of the seven grades. A special syllabus has been compiled for the small one-teacher schools. In regard to (b), the scheme aims at providing better trained and educated teachers, especially for the country schools. (See also § 2, 6, hereinafter.)

Methods of inspection have been revised with the idea of affording more scope and freedom to the teacher, and permitting the inspector, while not neglecting fundamentals, to give more time to advising and helping in the attainment of satisfactory results.

In order to provide increased facilities for more advanced education in country districts, sixteen higher primary schools were established in 1921 in rural towns.

Attention is being given to the establishment of separate infant schools wherever possible, in order to overcome retardation and secure higher efficiency in the lowest grades, and twenty-two separate infant schools are now in operation.

A Correspondence School was established in 1920 to meet the needs of children living beyond the reach of existing educational agencies, and this provided for the needs of upwards of 300 children in 1921.

All recently built schools conform to the latest approved principles in regard to orientation, lighting, and furniture, while the conversion of older buildings is being taken in hand so far as funds permit.

(v) *Western Australia.* During 1912 the curriculum of the Primary Schools was remodelled in order to bring it into line with the most up-to-date principles. The work was lightened in directions where experience showed there was overloading, and efforts were particularly directed toward the removal of the abstract and to the development of the imaginative and constructive throughout all grades. Greater freedom was given for experiment by the teacher, and it is recognized that considerable improvement has resulted. Montessori principles are being increasingly adopted in the teaching of the youngest children. Constructive work is receiving greater attention in all departments, and encouragement is given to original or research work of an elementary character. Four special courses—commercial, industrial, domestic, and professional—have been established at the central schools. These schools are practically day continuation schools designed to carry on the education of boys and girls beyond the primary stage. Continued efforts are being made in the direction of bringing about a closer correlation between primary and secondary education. The Modern School at Perth was opened in 1911, and in June, 1914, a Goldfields High School was opened at Kalgoorlie. There is also a High School at Northam and District High Schools are in operation at Geraldton, Albany, and Bunbury, while it is proposed to establish additional schools at the larger country centres, and in the meantime to grant scholarships at the existing High Schools to country children. During 1917 a medical officer for schools was appointed under the Public Health Department. Legislation passed in 1919 made compulsory the education of blind, deaf and dumb children, either at home or in special institutions.

A further revision of the curriculum was made in 1920, mainly with the object of removing superfluities, and devoting greater attention to the formative side of education. Special attention is being given to the problem of dealing with feeble-minded children. The experiment was tried in Perth during 1920 of grouping these children in classes at the central schools and giving them instruction in handwork and domestic science coupled with a modified curriculum in the ordinary school subjects. Results were so satisfactory that it is hoped to extend the system to other centres.

During 1921 twelve special rural schools were established at which the curriculum embraces practical instruction in various rural industries for boys, and in domestic economy, fruit preserving, etc., for girls.

(vi) *Tasmania.* During the last few years educational effort in Tasmania has been directed to the development on modern lines of the primary system, the foundation of secondary schools, and the provision of a satisfactory system of training for teachers.

Kindergartens, Montessori Schools, and Model Country Schools have been established as adjuncts to the training system, and the courses have been remodelled with a view to providing trained teachers for secondary as well as for primary work. At the High Schools, secondary, commercial, and industrial courses have been established. School hygiene has received especial attention, doctors and nurses have been appointed, and two dental clinics have been established. During the year 1918, regulations were framed with the object of establishing separate infant departments under trained mistresses. Several have already been established, and it is proposed to open additional schools of this type as opportunity offers. Provision has been made for an extension of the system of teaching by correspondence for children in isolated districts. Improvements effected in the system of training teachers are alluded to later on. During 1921, after collaboration with the various grades of the teaching service, the inspectors, and the Principal of the Training College, the syllabus of instruction was remodelled to bring it into closer relationship with present day methods. Special attention was given during this year to the problem of the retarded and sub-normal child. Classes have been established to deal with pupils who from natural defects or other disabilities are unable to keep pace with the ordinary classes in the schools, and a special teacher has been attached to the Training College staff to instruct students in methods of dealing with the problem. Classes dealing with mothercraft and child-welfare have been established by the Child Welfare Clinic in connexion with the principal city schools. Steady progress is being made with the work of replanning the older schoolrooms to bring them into accord with modern requirements.

(vii) *Northern Territory.* Although the number of children of school age in the Territory is small, nevertheless ample provision has been made by the Commonwealth Government for their education. State schools are in operation at Darwin, Parap, Pine Creek, Alice Springs, and Emungalan. There is also a school for aboriginal and half-caste children at Kahlin Compound, Darwin. A satisfactory standard is maintained at the schools, but progress is somewhat retarded by irregular attendance. In January, 1922, a High School was opened at Darwin. The head master of the Darwin School makes periodical visits of inspection to the other schools.

(viii) *Present Position of State Education in Australia.* Throughout Australia primary education is compulsory and free, while there exists in all States a more or less liberal provision of scholarships and bursaries to the Higher State Schools, to the Secondary Schools, and to the Universities. Provided that the requisite standard is reached, it is, of course, permissible for children to receive home tuition, or to attend so-called private schools. The orientation, lighting, and ventilation of school buildings are being modernized. In all of the States periodical medical inspection of the children is in force. (A detailed statement of the work being done in this direction will be found in the chapter dealing with Public Hygiene.) Methods of training teachers are now better developed; and although the "pupil teacher" system with its effects have not been wholly eliminated, it appears to be gradually vanishing. (The methods adopted in the various States for the selection and training of teachers are described in some detail in § 2, 6, hereinafter.) There has been a wider employment of kindergarten principles in the early stages, and the more or less purely abstract teaching of the older days has been largely replaced by concrete methods. Such subjects as nature study, manual training, music, drawing, business practice, and domestic economy have received a general impetus. Greater attention has been given to the scientific classification of children. Moreover, as will be seen from the above, and from § 2, 4, the State Education Departments are increasing their activities in the direction of secondary education. Lastly, the system of inspection has been considerably remodelled. Under the old system, the inspector was little more than an examining officer, but, under the present régime, the primary duty of this officer consists in guiding and directing the teaching in accordance with approved methods. [See also § 6, Technical Education.]

(ix) *Co-ordination of Educational Activities.* As pointed out already, the educational system of New South Wales may now be considered as a more or less homogeneous entity, the various stages succeeding one another by logical gradation from kindergarten to university. In the other States development is proceeding on somewhat similar lines, activity in this respect being greatly helped by Inter-State conferences of directors of education and of inspectors and teachers.

## § 2. State Schools.

1. **General.**—The State Schools, or, as they are sometimes termed, the “public” schools, of Australia comprise all schools directly under State control, in contradistinction to the so-called “private” schools, the bulk of which, though privately managed, nevertheless cater for all classes of the community. Separate information regarding Technical Education is given in § 6.

2. **Returns for Year 1921.**—(i) *General.* The following table shows the number of State Schools, together with the teachers employed and the enrolment and “average attendance” in each State during the year 1921 :—

### STATE SCHOOLS.—RETURNS, 1921.

State or Territory.	Schools.	Teachers.(a)	Scholars Enrolled.	Average Attendance.
New South Wales(b) .. ..	3,213	9,425	295,962	251,376
Victoria .. ..	2,425	6,888	230,027	180,100
Queensland .. ..	1,625	4,116	128,225	99,152
South Australia .. ..	983	2,656	79,769	63,808
Western Australia .. ..	710	1,877	53,277	45,739
Tasmania .. ..	483	1,149	31,530	26,145
Northern Territory .. ..	6	9	252	178
Australia .. ..	9,445	26,120	819,042	666,498

(a) Exclusive of sewing mistresses.

(b) Including Federal Territory.

Unfortunately, the schemes of enrolment and of the computation of “average attendance” are not identical in each State, so that the comparisons are imperfect.

(ii) *Schools in the Federal Capital Area.* During the year 1921 fourteen State Schools were in operation in the Federal Capital Territory (Yass-Canberra). The pupils enrolled numbered 401 and the average attendance 277. Cost of upkeep in 1921 amounted to £5,072. By arrangement with the Federal Government these schools are conducted by the New South Wales Education Department on the same lines as the ordinary State Schools, the Department being recouped for expenditure.

3. **Growth of Enrolment and Attendance.**—The enrolment and average attendance at the State Schools in Australia are given below for the years 1891, 1901, 1911, and for each year of the period 1917 to 1921 :—

### STATE SCHOOLS.—ENROLMENT AND ATTENDANCE.—AUSTRALIA, 1891 TO 1921.

Year.	Total Population (a)	Enrolment.	Average Attendance.	Year.	Total Population (a)	Enrolment.	Average Attendance.
1891 ..	3,421	561,153	350,773	1918 ..	5,082	779,687	612,174
1901 ..	3,825	638,478	450,246	1919 ..	5,304	782,317	608,069
1911 ..	4,573	638,850	463,799	1920 ..	5,412	801,405	632,182
1917 ..	4,983	764,980	600,089	1921 ..	5,510	819,042	666,498

(a) At 31st December, in thousands.

The decline in attendance noticeable in 1919 was chiefly due to the epidemic of influenza which particularly affected the attendance returns for New South Wales.

4. **Distribution of Educational Facilities.**—(i) *In Sparsely-settled Districts.* It has always been the aim of the State to carry the benefits of education into the remotest and most sparsely-settled districts. This is effected in various ways:—(a) By the establishment of Provisional Schools, *i.e.*, small schools in which the attendance does not amount to more than about a dozen pupils, these institutions merging into the ordinary public school list when the attendance exceeds the minimum: (b) When there are not enough children to form a provisional school, what are known as Half-time Schools are formed, the teacher visiting them on alternate days: (c) In still more sparsely-peopled districts, an itinerant teacher goes from house to house within a certain radius. Thus, in Queensland during 1921 the 17 itinerant teachers' districts covered 545,000 square miles of country, while a distance of 64,355 miles was travelled in visiting 1,889 children. In this State also the Education Department has established what are known as Saturday Schools, in which small groups of children in outlying districts are visited by the nearest teacher on Saturdays and receive the benefit of several hours' instruction. These schools, of which there are ten, have been warmly welcomed in the districts in which they are established, inasmuch as under this system the children "outback" receive a greater amount of instruction than is possible under the system of itinerant teachers. Provision has been made for a vocational "top" to be established at schools in important distributing centres of inland pastoral areas in Queensland, and special classes receive instruction in manual work, commercial work, and domestic economy. Itinerant teachers capable of imparting instruction in domestic and manual work have also been appointed to visit parents and children at various localities in the Central District. Further, in New South Wales, Victoria, South Australia, Western Australia and Tasmania parents in the thinly-peopled areas are allowed to club together and build a school, which receives aid from the Government in the form of a yearly subsidy and grant of school material. In some cases the Department also provides the building. During 1921 subsidy was paid to 680 schools in New South Wales, Victoria had 16 schools of this type, Western Australia 23, and Tasmania 44: (d) Several "travelling" schools have been established in New South Wales, the teacher being supplied with a van carrying a tent for himself and one for use as a school, together with books and apparatus for primary teaching. South Australia has devised attractive portable schools to meet the needs of new districts and temporary settlements. Railway Camp Schools are established in some States on the sites of extensive railway works: (e) New South Wales, Victoria, South Australia, Western Australia, and Tasmania provide also for education, by correspondence, of children in localities not at present reached by the methods outlined above. At the end of 1921 upwards of 1,000 children were on the rolls of the three Correspondence Schools in New South Wales. In Victoria, about 200 invalid and isolated children were receiving instruction by this means. In South Australia it is stated that the children of one family are 400 miles from the nearest school. Another family of four is 320 miles distant from a school, and several families live along the camel tracks in the far north. The Port Augusta School supervises the work of twelve children living along the East-West railway line. In 1920 a special Correspondence School, staffed with five teachers, was opened in Adelaide, and at the end of 1921 over 300 children were on the roll. A library has been established in connexion with the school, and the books are much appreciated by both parents and children "outback." The enrolment in correspondence classes in Western Australia during 1921 was 534. There are nine teachers attached to the Correspondence School in Hobart, and a visiting teacher tours the whole island, calling, as far as possible, at all the isolated dwellings.

It was proposed to initiate a system of postal tuition in Queensland early in 1922.

(ii) *Centralization of Schools.* The question of centralization of schools adopted so successfully in America and Canada has received some attention in Australia, and particularly in New South Wales. It is recognized that a single adequately-staffed and well-equipped central institution can give more efficient teaching than a congeries of small scattered schools in the hands of less highly trained teachers, and the small schools in some districts were therefore closed and the children conveyed to the central institution. The principle was first adopted in New South Wales in 1904, and in 1921 a sum of £36,150 was expended in boarding allowance and conveyance to central schools. Cost of conveyance to elementary schools in Victoria during 1920–21 was returned as £6,680. In South Australia the sum of £623 was disbursed in 1921 in connexion with travelling expenses of school children.

(iii) *Evening Schools.* Evening Public Schools have been in existence for many years in some of the States, but their progress has been uncertain. In New South Wales the 46 Evening Continuation Schools had an effective enrolment of 3,697 and an average attendance of 2,770 in 1921. The schools for boys are classed as commercial, commercial preparatory, junior technical, and junior technical preparatory, and for girls as domestic, and domestic preparatory. Attendances at the schools for boys numbered 2,339, and at those for girls 531, the total showing an increase of 819 over that for 1920, and being the highest recorded in the history of these schools. In Victoria there was only one night school and one evening continuation school in operation during 1921, the average attendance being 26 and 65 respectively. Although the Education Act in Victoria gives authority for the establishment of evening continuation classes at which the attendance of boys up to the age of seventeen years and living within a radius of 2 miles may be made compulsory for six hours a week, considerations of expense have prevented the free exercise of this power. Evening Continuation Schools have been established under regulation in South Australia, and are intended principally to help the working boy to improve his general education and to add to the store of knowledge most useful in his present work. Western Australia has evening continuation classes in 25 centres; the enrolment in 1921 numbered 2,939.

(iv) *Higher State Schools.* (a) *New South Wales.* In New South Wales, public schools which provided advanced courses of instruction for two years for pupils who have completed the primary course were classed as Superior Schools. These were reorganized in 1913 as Day Continuation Schools, and divided into Superior Commercial Schools, Superior Junior Technical Schools, and Superior Domestic Schools for Girls. During 1921 there were 87 schools of this type in operation, of which 15 were in the Commercial group, 26 in the Junior Technical, and 46 in the Domestic group, with an average attendance of 6,636 in the sixth and seventh classes. It is believed, however, that greater efficiency could be produced by reducing the number of these schools and establishing Central "Superior Public Schools" instead. Provision has also been made for the more advanced education of children in country centres by the establishment of 13 District Schools. These schools, which in 1921 had an average attendance of 812, are specially staffed, and, in addition to the usual work, undertake the preparation of students for admission to the training colleges. Composite Courses were given in 1921 at 57 country schools, Course A leading to the intermediate certificate, B to the commercial superior public school certificate, and C preparing for the public service entrance examination. The average attendance at these courses was 1,281. In addition, there are 27 High Schools in the State. These had an average weekly enrolment in 1921 of 7,730, with an average attendance of 7,175. To meet the wishes of representatives of the registered Secondary Schools, the syllabus of the High Schools was amended in 1913, and now offers such a wide range of choice in the selection of subjects that there is no possibility of producing a merely stereotyped uniformity of study. To meet the growing demand for High School education in the metropolis and in country centres, Intermediate High Schools were established, and in 1921 the number had increased to 25, with an average attendance of 4,061. In accordance with Departmental regulations, there is a liberal distribution of scholarships and bursaries to the higher State Schools and to the University. During the last quarter of 1921 over 1,000 pupils holding bursaries were receiving instruction at High, Intermediate High, and District Schools. Under the provisions of the University Amendment Act of 1912, 200 exhibitions were awarded in 1921 to successful students at the leaving certificate examinations, 110 of these being given to State School pupils and 90 to students from registered secondary schools. The principal faculties which absorbed these exhibitioners were Arts, 62; Medicine, 39; Law, 27; Engineering, 20.

The Sydney Grammar School (not a "State" School in the ordinary acceptance of the term), which receives a State endowment of £1,500 a year, had, in 1921, an enrolment of 623 pupils, and an average attendance of 552.

(b) *Victoria.* In Victoria, action was taken in January, 1912, to give effect to the provisions of the Education Act of 1910, with regard to the decentralization of the system of secondary education. Thirty-nine Higher Elementary and 31 District High Schools have been established, and, to obviate congestion at the High Schools, Higher Elementary Classes are carried on at 15 "Central" Schools. The enrolment on the 31st December, 1921, at the Higher Elementary Schools was 3,486, of whom 1,731 were girls, at the

District High Schools 6,980, of whom 3,401 were girls, while 1,173 boys and 1,280 girls were receiving secondary teaching in the Central Schools. The qualifications for admission to the High Schools and Higher Elementary Schools are that pupils shall be not less than 12 years of age, shall possess the qualifying certificate or its equivalent, and that their parents shall undertake that the children will remain at school for four years. For the first two years there is a common course for all pupils, thereafter replaced by four special courses:—(1) A preparatory professional course for pupils preparing to proceed to the University, to enter the teaching profession, or to gain a sound general education; (2) an agricultural course to be taken in Agricultural High Schools; (3) a commercial course; and (4) a domestic arts course for girls. Parallel with these courses an industrial course has been developed for pupils who intend to enter upon some form of industrial occupation.

The demand for places in the metropolitan High Schools is in excess of the available accommodation, and although the "Central" Schools, already referred to, have to some extent relieved the congestion, increased provision is urgently needed.

In the Junior Technical Schools pupils are enrolled at 12 and 13 years of age for a course extending over three years designed to qualify for entrance to the Senior Technical Schools. There were 20 of these junior schools in operation at the end of 1921 with a net enrolment of 3,110 pupils.

Schools of Domestic Arts have been established—three in Melbourne, one in Ballarat, and one in Bendigo. At these institutions, in addition to continuing their general education, the girls receive special instruction in cookery, needlework, and various home duties. A modified course in domestic arts is given to senior pupils at Maryborough and Castlemaine.

Scholarships granted by the Department are as follows:—(a) One hundred junior, tenable for four years at a District High School or approved Secondary School, with allowance of £26 per annum for board when required; (b) Forty senior, tenable three to six years, with allowance of £40 towards expense of course at University; (c) Fifty junior technical, giving free tuition for two years at a Junior Technical or other approved school, and, in certain cases, board allowance of £26 per annum; (d) Fifty-five senior technical, giving free tuition for approved courses at Technical schools, with £30 allowance for day students, and £10 for night students; (e) Four senior technical, available for two to three years, with allowance of £40 towards expenses of a course in architecture, engineering, or science at the University; (f) Sixty teaching, similar in other respects to junior; (g) Twenty nominated courses, giving four to six years' free tuition in agriculture, mining, or veterinary science at the University, with allowance in certain cases of £26 per annum.

(c) *Queensland.* Prior to the year 1912, Queensland did not possess any distinctly secondary schools under State control, but in February of that year High Schools were opened at Warwick, Gympie, Bundaberg, Mount Morgan, Mackay, and Charters Towers. Tuition at these schools is free, but students must pass a qualifying entrance examination. Three courses of study—General, Commercial and Domestic, are provided. The General Course leads up to the University, and students will be able to matriculate from the High Schools. In 1917 and 1920 High Schools were opened at Gatton and Roma respectively. High Schools ranking in all respects with those mentioned are also conducted at Brisbane Central Technical College and at the Technical Colleges at Toowoomba and Rockhampton, and "The Brisbane Junior High School" was opened in 1920. In smaller centres where an average of not less than 25 qualified pupils can be obtained, secondary tuition is provided at existing State Schools, and this has been arranged for at Herberton, Childers, Dalby, Kingaroy, Pittsworth, Southport, Cairns, Wynnum Central, and Emerald. The enrolment at High Schools in 1921 was 2,145, and the daily attendance 1,511. There are, moreover, ten Grammar Schools—six for boys and four for girls—each of which was subsidized by the State to the extent of £750 per annum, and in addition received a payment of £250 per annum for providing five scholarships for State scholars. Owing to representations regarding increased cost of maintenance, the grants to the Grammar Schools for boys and girls in Brisbane were raised to £3,500 and £2,000 respectively in 1921, and in the case of the remainder of these Schools the grant was raised to £1,500 each. The Government also pays *per capita* fees in payment for the tuition of state scholarship-holders in attendance at the Grammar Schools. The enrolment at the Grammar Schools in 1921 was 1,964 and the average attendance 1,649. Since the year 1909 these schools have been regularly examined by the inspectors of the Education Department.



Under the amended scheme of scholarships to Secondary Schools which came into force in 1914, all candidates who gained 50 per cent. of marks at the previous December examination were eligible for free scholarships tenable for three years at an approved Secondary School. Provision was made for board allowance of £30 per annum where necessary, and of £12 where the holder lived at home. In 1915 the tenure was altered to two years, with the proviso that, if the holder at the end of that period obtained an approved pass at the University Junior Examination, an extension scholarship of two years was granted, and, in addition, an extension at the end of the fourth year where an approved pass at the Senior University Examination was obtained. The extension scheme came into force in 1917. In 1918 the tenure was extended to two years and a half in order to afford better preparation for the work prescribed by the University for the Junior Public Examination.

As a result of the 1921 examinations, held in April, scholarships were awarded to 751 boys and 486 girls. Of the successful candidates 263 were granted the allowance of £12 per annum, and 76 received the allowance of £30.

Prior to the establishment of the Queensland University, three exhibitions per annum to approved Universities were granted. These have been replaced by twenty scholarships to the local University. Each scholarship is tenable for three years, and carries an allowance of £26 per annum if the holder lives at home and attends the University, or £52 per annum board allowance where necessary. In addition to these "open" scholarships, twenty "teacher" scholarships are granted to students who undertake to enter the teaching profession. These carry an allowance of £66 where the students live away from home, and £39 to those who live at home.

(d) *South Australia.* Including the Adelaide High School, there were altogether 22 High Schools open in South Australia in 1921, with an enrolment of 3,211, an average attendance of 2,860, and a staff of 124 teachers. In addition to giving secondary education, these institutions form a valuable source from which the Department can draw a supply of young teachers. Sixty qualifying exhibitions to these schools are open to pupils who have completed the primary course, 50 of such exhibitions being reserved for country children. The exhibitions are of the value of £10 each, with an additional allowance of £20 per annum if it is necessary for the holder to live away from home.

The Department has also established 16 Higher Primary Schools in order to provide increased facilities for higher education to country children. These schools cover the first and second years' work at the High Schools, and students who complete this work may compete for 24 junior exhibitions tenable for three years at a High School.

Pupils from the High Schools may compete for 12 bursaries tenable at the University, the School of Mines, or the Roseworthy Agricultural College. The bursaries carry exemption from fees, with an allowance of £20 per annum, which may be increased to £40 if the bursar is living away from home.

(e) *Western Australia.* In 1921 the Perth Modern School, the Eastern Goldfields High School, and the High School at Northam provided courses up to the leaving certificate standard, and the District High Schools at Geraldton, Bunbury, and Albany provided a three years' course up to the junior certificate standard. The schools at Albany and Bunbury will shortly rank as full High Schools. In addition, there are "Central" Schools in which the upper classes are collected from various contributory schools in the surrounding district. These supply :—(a) A Professional Course lasting three years leading to the junior certificate of the Public Examination Board. (In the Perth Central Schools classes leading up to the Leaving Certificate and Matriculation, thus covering the High School course, have also been established.): (b) A Commercial Course of three years: (c) An Industrial Course lasting two years: (d) A Domestic Course of two years for girls. Altogether 2,896 pupils were taking these courses, and if to this number the 642 children enrolled in the Commercial and Professional Courses at the large country towns be added, the total enrolments amount to 3,538. The Perth Modern School and the Eastern Goldfields High School had an enrolment in 1921 of 383 and 201 students respectively. Entrants to State secondary schools must have passed an examination identical with that for Secondary School scholarships, and boarding allowance up to £30 per annum is provided where necessary. Evening continuation classes were attended at 25 centres in 1921 by about 2,900 pupils. The classes are intended to provide some measure

of higher education to those who leave school as soon as they reach the compulsory age of 14 years. Admission to these classes is free, but pupils must attend regularly three evenings a week. Evening Schools are held in various parts of the State, but the work carried on is mainly primary.

Fifty scholarships tenable for three years (with possibility of extension to five years) at approved Secondary Schools are annually offered for boys and girls attending Government or other efficient schools. Ten carry an allowance of £20 per annum, and the remainder entitle the holders to receive a grant for books and travelling expenses. Boarding allowance up to £30 per annum may also be granted where necessary. Thirty-three bursaries of the value of £5 each tenable for two years were also granted in 1921. Scholarships to enable children from country districts to attend at District High Schools or the Narrogin School of Agriculture were inaugurated in 1917. Only those children who must live away from home are eligible, and the tenure may in some cases be extended to five years. The scholarships carry an allowance of £30 per annum. During 1921, 35 District High School Scholarships, and 11 tenable at the Narrogin School of Agriculture were awarded. Thirteen scholarships also were awarded in 1921 to children of fallen or disabled soldiers. The scholarships are tenable for three years, and, where necessary, carry an allowance of £30 per annum.

(f) *Tasmania.* Up to the year 1912 the Department confined its efforts to the provision of primary education for the school children in Tasmania. In 1911, however, super-primary classes were formed in the larger schools, with an enrolment in 1911 of 200, and in 1912 of 400 pupils. It was recognized, however, that the previously existing scheme of scholarships and exhibitions was inadequate to meet the demands for higher education. High Schools were therefore opened in January, 1913, at Hobart and Launceston, and later on at Devonport, Burnie, and Huonville. The enrolment and average attendance at the five High Schools in 1921 were 819 and 770 respectively. These provide for five classes of pupils—(i) Those who desire to become teachers; (ii) University students; (iii) Commercial; (iv) Mechanics; (v) Home duties (girls). The full secondary course covers five years. Under the Bursaries Act of 1915 five junior city bursaries tenable for three years at a State or registered Secondary School and carrying allowances up to £16 were awarded, also seventeen junior bursaries for country children with allowances up to £46, and six for children in country schools of the fourth to the seventh class with allowances up to £46 tenable for three years. Four senior city and twelve senior country bursaries tenable for two years and with allowances up to £46 were also awarded in 1921.

(v) *Agricultural Training in State Schools.* (a) *New South Wales.* Allusion was made in the preceding issue of this work to methods of agricultural training in vogue in the State Schools in New South Wales. (See Year Book 15, page 735.) During 1921 the whole subject of agricultural education was revised, and, under a Supervisor of Agriculture, a definite course of scientific and practical instruction has been evolved. This course is now being taken at the residential schools at Hurlstone and Yanco, and it is proposed to establish similar schools in other parts of the State. The necessary number of teachers to initiate the work has been provided, and students will be trained at the University to meet future requirements. Proposals are under consideration for the establishment also of (1) an Agricultural Continuation School in the metropolis, giving a two years' course in elementary agriculture to boys unable to attend a High School, and a course in domestic science and horticulture for girls; (2) Rural Schools, giving a course in elementary agriculture, nature study, and farm mechanics for boys, and domestic science and horticulture for girls; and (3) re-organization of Rural Camp Schools.

(b) *Victoria.* In Victoria, what are termed Agricultural High Schools have been established at Ballarat, Colac, Leongatha, Mansfield, Mildura, Sale, Shepparton, Wangaratta, Warragul, and Warrnambool. Pupils must be at least fourteen years of age, and have passed beyond the curriculum of the elementary school, or else be able to afford satisfactory proof that they are qualified to profit by the instruction offered. The schools are practically secondary schools with an agricultural bias, and form a link between the rural school and the agricultural college. They are also used as a preliminary stage in the education of boys and girls who wish to become teachers and eventually graduate in the State Training College and the University. At some of the schools short courses in agriculture have been instituted for farmers' sons who have left school. A local council

is appointed for each school, and exercises a general oversight over its operations. The experimental plots at these schools have aroused much interest among the farmers from the surrounding districts. A Supervisor of Agriculture reports and gives advice on the teaching of agriculture in the State Schools. A fair number of teachers have gained diplomas in agriculture, and are capable of giving practical instruction at the High Schools. Schools of Agriculture are conducted by the Agricultural Department at the State Research Farm, Werribee. Teachers in the wheat-growing districts are also instructed for short periods by the organizing Inspector of Agriculture at the University, and their services are utilized as leaders or group supervisors in their districts. The elementary principles of agriculture are taught in a large number of State Schools, and progress has been made in the direction of establishing agricultural clubs and home-project organizations. A Horticultural Society has been established, with a number of schools in affiliation, while practical help in school gardening is afforded by the departmental supervisor. The Society has a nursery and distributing centre for plants and seeds at Oakleigh, and sub-nurseries have been established at various schools.

(c) *Queensland.* In Queensland the Government provides a small grant to encourage the study of agriculture, horticulture, and kindred subjects in the State Schools, while a departmental teacher of agriculture visits the schools and gives assistance in agricultural, horticultural, and nature study work. Excellent experimental work has been carried out at some of the schools, and gardens have been established wherever circumstances permitted. Several of the schools, with their surroundings of well-grown shade and ornamental trees, make attractive spots in the country landscape. Short courses of instruction for teachers have been instituted at the Gatton College. A large number of teachers have gained a practical knowledge of milk and cream testing and dairy-farming methods generally, and the subject is now added to the programme of instruction in several of the dairying districts. The practical advice and help given has resulted in many instances in marked improvement in the dairy herds. At Nambour, a Rural School, the first of its type, was opened early in 1917. In addition to the ordinary subjects of the curriculum, this school provides for instruction in farming, fruit growing, dairying, etc., with dress-making, millinery and cookery for girls, and woodwork, leatherwork, and tinsmithing for boys. Training in business methods, shorthand and typewriting is also available. Supplies of trees for distribution to other schools are raised at Nambour, and many schools distribute trees and plants for home planting. In view of the success of this institution, schools of somewhat similar type have been established at Boonah, Gracemere, and Marburg, and it is proposed to add to their number when funds permit.

(d) *South Australia.* In South Australia the Public Schools' Floral and Industrial Society, founded in 1880, holds annual exhibitions of school work from all parts of the State. In addition, it has for some years undertaken the distribution of flower seeds among school children at a very cheap rate, and has thus fostered the love of horticulture. A special instructor has been appointed to give assistance to teachers desirous of making their school gardens aid in nature study work. Assistance is given by personal visits as well as by correspondence, and by instruction at vacation Summer Schools. Teachers in training receive instruction in Nature knowledge and the art of conducting Nature Studies. A seed wheat competition amongst school children inaugurated in 1911 proved very successful, a second, which was commenced in 1916, concluded in 1920, and a third in 1921. In 1919 two of the competitors who entered on the work of wheat-breeding produced wheat of such quality that they were unable to supply the orders for seed grain received from South Australia, as well as from other States. Milk-testing is carried out in several schools, and the agricultural training generally is greatly helped by the practical co-operation of the farmers.

At the end of 1921 a Forest Camp School was held in the Kuitpo forest, the scholars receiving practical training in forestry and allied subjects.

(e) *Western Australia.* In Western Australia an advisory teacher of nature study visits the schools and gives advice in regard to proper methods in horticulture and experimental agricultural work. The number and usefulness of the gardens and experimental crops attached to State Schools show marked improvement each year. Special attention

is being given to the needs of the country schools, and as far as possible the instruction is given a practical bias. In some districts definite projects are undertaken of importance to a rural community, *i.e.*, vegetable growing, bee-keeping, and pig and poultry keeping. The boys are also trained in useful manual work, and the girls, wherever possible, are taught simple cookery, and the drying and preserving of fruit and vegetables. Twelve special rural schools have been established in different parts of the State, and the project system has as far as possible been made portion of the curriculum. Early in 1914 a school was opened on the Narrogin State Farm. The pupils are taken directly from the primary schools, and the course of instruction lasts for two years. On its completion students are qualified to enter on the diploma course at the University. The school was brought under the control of the Education Department in 1921, and has so justified its existence that it cannot accommodate all the applicants for admission. At present 40 students are accommodated, but 60 will be taken in 1922, and, later on, 80. Provision has been made for practical work in agriculture at the High School at Northam.

(f) *Tasmania.* In Tasmania the organizing teacher of nature study visits and advises the teachers at the State Schools, and also gives addresses and model lessons at the schools of instruction. Considerable success has attended the establishment of classes in Hobart for instruction in apple-grading and packing, and similar classes have been formed at several other centres.

5. *Teachers.*—The distribution of the teaching staff in the State Schools during the year 1921, including teachers of needlework, was as follows :—

#### STATE SCHOOLS.—TEACHING STAFF, 1921.

State.	Principal Teachers.		Assistants.		Pupil or Junior Teachers.		Sewing Miss-tresses.	Total.		
	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Total.
New South Wales ..	2,172	1,250	1,703	4,172	10	118	160	3,885	5,709	9,594
Victoria ..	1,597	1,064	535	1,814	300	1,578	395	2,432	4,851	7,283
Queensland ..	891	723	506	1,382	166	358	.	1,653	2,463	4,116
South Australia ..	382	578	274	977	132	313	125	788	1,993	2,781
Western Australia ..	340	360	226	758	24	169	76	500	1,363	1,953
Tasmania ..	189	286	60	323	45	246	6	294	861	1,155
Northern Territory	2	6	..	1	..	..	..	2	7	9
Total ..	5,573	4,267	3,394	9,427	677	2,782	771	9,644	17,247	26,891

The figures for principal teachers include mistresses of departments, while students in training colleges have been grouped with assistants.

It will be observed that there is a fairly large number of junior teachers, or pupil teachers, as they are called in some of the States. The pupil teachers will, however, in time disappear, and their places will be filled by young people who have undergone a course of training in schools specially provided for the purpose. Allusion to the methods of training will be found in the next sub-section.

In New South Wales attention has recently been drawn to the difficulty of securing an adequate supply of teachers, particularly male teachers for small schools in out-back districts.

6. *Training Colleges.*—The development of the training systems of the various States has been alluded to at some length in earlier issues of the Year Book. The present position is as follows :—

(i) *New South Wales.* During 1921, the total number of students in training was 925, of whom 383 were taking the twelve months' course for rural teachers or assistants,

and the balance the various courses up to five years, and the special courses arranged in accordance with departmental requirements. Practically all accessible metropolitan schools are used as practice schools for giving training-college students opportunity to acquire practical skill in teaching. Formerly the limits of accommodation at the College were responsible for the employment in the schools of a number of untrained juniors, but during recent years teachers entering the service have at least six months' professional training. The Principal of the College is also Professor of Education at the University. Members of the College staff are afforded opportunities of visiting foreign countries on study leave. In addition to the help and advice afforded by the inspectorial staff, teachers in rural districts receive the advantage of tuition by lectures and correspondence from members of the Training College staff. The Department also arranges for schools of instruction in various subjects during vacations.

(ii) *Victoria.* During recent years the educational and professional attainments of the general body of teachers in Victoria have steadily improved. Prior to the establishment of the High Schools, the pupil or junior teachers were recruited from the ranks of those who had obtained the Merit Certificate in the eighth grade of the elementary schools, and the acquirement of the necessary literary qualifications for promotion was greatly hindered by the circumstance that they were engaged in teaching for the greater portion of the day. Under present conditions, candidates spend at least two years in a High School, and consequently enter on their professional duties with a better mental and physical equipment. A number of High School pupils after serving as junior teachers for a year are awarded studentships at the Training College. The present Training College dates back to 1874, but during the retrenchment period, viz., from 1893 to 1900, it was closed. The institution was reopened on February, 1900, with an enrolment of 57 students. During the year 1921 the students in training numbered 250, of whom 169 were women. A Correspondence class has been formed for country teachers desirous of qualifying for the Infant Teacher's Certificate. The students at the Hostel receive training in domestic economy. Three city and six country practising schools are attached to the Training College, and four infant rooms with attached kindergartens have been specially equipped for the training of infant teachers. The University High School gives secondary teaching practice to both departmental and private students. Three courses of training are provided for at the College, i.e., for Kindergarten or infant teachers, for primary teachers, and for secondary teachers.

(iii) *Queensland.* The great majority of the teachers in Queensland originated in the pupil-teacher system, under which the beginner, at the age of fourteen or thereabouts, was placed in charge of a class, his efforts being to some extent supervised by the head teacher or senior assistant. In addition to the strain involved in teaching, the neophyte had to prepare notes of lessons, and to study for the annual examinations. Under the present system, twenty scholarships to the Training College are awarded annually to candidates who obtain approved passes at the University Junior Examination. The scholarships have a currency of 2½ years, and carry a living allowance. In addition, 43 appointments as student teachers were made on the result of approved passes, and the selected candidates receive academic and professional training under the head teachers of the schools to which they are appointed.

At the Training College the students receive tuition in teaching methods, as well as in ordinary scholastic subjects, while practice in teaching is gained at the Central Practising School, at the Buranda Boys' and Girls' School, and at the Kangaroo Point Infants' School. The Principal of the Brisbane High School supervised the work of a certain number of students in their practical course at the end of the year. During 1921 there were 78 students in training at the College, including 24 University students, 17 teacher students, and 37 taking the short course for rural teachers. Teachers of small schools are also greatly helped by the inspectors' practical and theoretical instruction in the various districts, while the Central Technical College gives correspondence lessons to small-school teachers desirous of passing the Class III. examination. Schools of instruction for the untrained teachers of rural schools are conducted by the inspectors in their respective districts.

(iv) *South Australia.* In 1920 the scheme for the training of teachers was remodelled. The new system is based on three fundamental principles. (1) That the candidate should have completed his ordinary education—at least up to the standard of the Junior Public Examination—before entering on the professional course. (2) That he should complete his professional course before being permitted to teach. (3) That in order to secure uniformity, the various courses should be controlled by one person, instead of several, as was formerly the case. The remodelled courses came into operation in January, 1921, and are arranged to give the necessary academic and professional training as follows:—  
 (a) Short course (one year) for the less important positions in primary schools and for teachers of Class VII. schools: (b) Primary Course (two years) for the more important positions in primary schools: (c) Kindergarten and Sub-Primary Course (two years) for positions as infant teachers: (d) Secondary Course (three to four years) for High School teachers: (e) Commercial Course (two years) for teachers of Commercial Subjects. (f) Domestic Arts Course (two years) for teachers of Domestic Arts: (g) Woodwork Course (one year) for Teachers of Woodwork. The total number of students in 1921 was 325. Practical work in teaching is carried out at six Practising Schools, for primary, rural, and infant teachers, and at selected schools of other kinds for secondary teachers, and teachers of special subjects. In order to provide an adequate supply of qualified students, provision is made for the award of 150 scholarships annually, tenable at a High School. These scholarships entitle the holder to one or two years' education at a High School beyond the Junior Public stage, with an allowance of £40 per annum for boys and £30 for girls, and a boarding allowance of £20 per annum if students live away from home. The new scheme of inspection, while providing for a measure of examination to test progress in fundamentals, gives the inspector a greater opportunity to estimate the general value of the teacher's work and to give advice and assistance where needed. Special evening or Saturday morning classes of instruction are held by the inspectors in their districts, while during 1921 four Schools of Instruction were conducted by inspectors and attended by sixty teachers from rural schools.

(v) *Western Australia.* A Training College for teachers was opened at Claremont in 1902. The original building provided accommodation for 60 students, but extensions were opened in 1908, and the number in training in 1921 was 155. Of the long-course students, 34 were in the first year, 38 in the second year, and 5 in the third year. The remaining 78 were taking the one year's course for teachers of country schools, except 3 graduates, who were taking a special course of one year. A fair proportion of the full-course students attend lectures at the University, and some remain for a third or fourth year to complete degree work. In addition to the ordinary schools at which teachers gain professional experience, special practising schools have been established for the proper training in teaching and managing the smaller country schools. The standard for entry into the teaching profession has been considerably raised during recent years. Formerly young people were taken at the age of fourteen years from the primary schools and appointed as "pupil" teachers. At present the probationary teachers or monitors must be seventeen years of age, and are expected to possess a good secondary education. After a short period of probation they enter the Training College for special professional training. University graduates receive a special course of one year's duration. Untrained applicants are appointed only when the supply of trained teachers is insufficient. The teachers in the metropolis are greatly helped by periodical conferences of inspectors and teachers, while in rural areas demonstration lessons are given by inspectors at convenient centres. Teachers in isolated areas are assisted by the correspondence classes.

(vi) *Tasmania.* During 1917 the scheme for the training of teachers was recast and grouped in four divisions:—(1) A short course to supply the professional training required for the less important positions in the primary schools and for teachers of the smaller provisional and Sixth Class schools: (2) Training of infant teachers: (3) Training for positions in the larger primary schools: (4) Training of high school teachers. Practical training for the various classes is given in well-equipped practising schools and in model small schools. The inspectors hold schools of instruction for teachers of small schools, and teachers of moderate attainments are also helped by the Correspondence School. The enrolment at the Training College in 1921 numbered 123.

7. **Expenditure.**—(i) *Maintenance.* The net expenditure on maintenance in all grades of schools, excepting technical schools, and the cost per head of average attendance, for the five years ended 1921 are shown below. The figures do not include expenditure on buildings, which is given separately in a subsequent table.

**STATE SCHOOLS.—EXPENDITURE ON MAINTENANCE, 1917 TO 1921.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
TOTAL.								
	£	£	£	£	£	£	£	£
1917	1,662,658	1,033,876	562,418	295,261	319,954	115,547	1,594	3,991,308
1918	1,748,221	1,098,060	567,296	308,423	336,852	125,572	1,668	4,186,092
1919	1,971,209	1,127,962	618,007	342,907	348,694	142,097	2,027	4,552,903
1920	2,668,060	1,325,149	917,314	403,768	394,931	182,822	2,763	5,894,807
1921	3,227,245	1,615,882	999,868	452,364	464,136	230,131	2,607	6,992,233

**PER HEAD OF AVERAGE ATTENDANCE.**

	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1917	7 9 10	6 3 5	6 7 5	5 4 0	7 15 11	4 15 1	8 11 5	6 13 0
1918	7 14 10	6 10 10	6 15 6	5 3 4	7 17 3	5 1 11	8 9 4	6 18 5
1919	9 5 2	6 9 10	6 13 6	5 14 10	7 19 2	5 13 4	10 19 2	7 9 9
1920	11 7 5	7 15 6	9 13 11	6 11 0	8 15 0	7 3 5	12 1 4	9 6 6
1921	12 16 9	8 19 5	10 1 1	7 1 9	10 2 11	8 16 0	10 12 11	10 9 10

As the figures show, the cost per head of average attendance has grown considerably during the quinquennium. This increase is due to the greatly enhanced cost of materials and equipment, and to the higher salaries paid to the teaching staff to meet the increased cost of living and also to make the service more attractive. For New South Wales the expenditure on salaries rose from £1,589,000 in 1919 to £2,188,000 in 1920, and to £2,659,000 in 1921. In Queensland the increase in 1920 was largely due to additional salaries and allowances—amounting to about £286,000—paid to teachers in consequence of awards of the Industrial Arbitration Court, while the further increase in 1921 was mainly accounted for by heavier cost of salaries and allowances. Increased salaries and allowances also were chiefly responsible for the high average cost in Western Australia for the year 1921 as compared with previous years.

(ii) *Buildings.* Expenditure on school buildings in each of the years quoted was as follows :—

**STATE SCHOOLS.—EXPENDITURE ON BUILDINGS, 1917 TO 1921.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
1917	208,733	116,010	78,080	44,311	21,034	21,667	253	490,088
1918	238,434	62,532	94,323	40,299	16,540	8,883	252	461,263
1919	265,174	87,273	94,603	41,974	24,579	23,897	650	538,150
1920	370,412	131,266	138,985	28,907	26,851	19,406	..	715,827
1921	293,420	176,099	67,490	64,885	70,533	53,059	..	725,486

(iii) *Total.* The net total cost during the year 1921 was as follows :—

**STATE SCHOOLS.—NET TOTAL COST, 1921.**

Item.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
Net cost of education, including buildings ..	3,520,665	1,791,981	1,067,358	517,249	534,669	283,100	2,607	7,717,719

The figures in this and the preceding tables refer to all grades of State schools (with the exception of technical schools), and include evening schools. Including buildings, the net cost per scholar in average attendance for the whole of the State schools in Australia amounted in 1921 to £11 11s. 7d. as compared with £4 9s. 3d. in 1901.

8. *School Savings Banks.*—Returns show that these institutions are in existence in three States. In New South Wales, there were 847 banks at the end of 1921, the deposits amounting to £67,670, and withdrawals to £67,300. Since the establishment of the banks in 1887, deposits totalled £822,316, and withdrawals £804,119. Of the latter sum the withdrawals of accounts of £1 and upwards for deposit in the Government Savings Bank as children's individual accounts amounted to £161,304. In South Australia, 653 schools had 35,665 depositors, with £42,025 to their credit; and in Western Australia, there were 498 school banks, with 36,390 depositors and £56,906 to their credit.

### § 3. Private Schools.\*

1. *Returns for 1921.*—The following table shows the number of Private Schools, together with the teachers engaged therein, and the enrolment and average attendance in 1921 :—

**PRIVATE SCHOOLS, 1921.**

State.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales .. ..	677	4,069	78,460	64,172
Victoria .. ..	486	2,063	59,922	(a)50,900
Queensland .. ..	175	1,071	26,145	21,905
South Australia .. ..	166	793	15,633	11,575
Western Australia .. ..	122	511	11,813	10,461
Tasmania .. ..	69	327	6,650	5,017
Northern Territory .. ..	1	2	65	43
Total .. ..	1,696	8,836	198,688	164,073

(a) *Estimated.*

The totals for New South Wales include returns from the Sydney Grammar School, which receives a yearly State subsidy of £1,500, and which, in 1921, had an enrolment of 623, and an average attendance of 552.

The figures for Queensland include the returns from Grammar Schools, of which there are ten—six for boys and four for girls, with an enrolment of 1,143 boys and 821 girls. These schools are governed by boards of trustees, partly nominated by Government, and partly by the subscribers to the funds. The trustees make regulations regarding the fees of scholars, the salaries of teachers, and generally for the management of the schools. The total Government aid received in 1921 was £17,979, of which the Brisbane Boys' and Girls' Grammar Schools received £3,500 and £2,000 respectively, and the others about £1,500 each. The Grammar Schools are inspected annually by officers of the Department of Public Instruction.

\* Private schools include all schools not wholly under State control. The term "private," though popularly applied, is of course a misnomer.



2. **Growth of Private Schools.**—The enrolment and average attendance at Private Schools during 1891, 1901, and in each year of the period 1917 to 1921 are as follows :—

**PRIVATE SCHOOLS.—ENROLMENT AND ATTENDANCE, 1891 TO 1921.**

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891 .. ..	124,485	99,588	1918 .. ..	190,999	151,590
1901 .. ..	148,659	120,742	1919 .. ..	193,115	145,630
1911 .. ..	160,794	132,588	1920 .. ..	192,093	156,083
1917 .. ..	177,126	144,409	1921 .. ..	198,688	164,073

The comparatively small rate of increase in private school enrolment and attendance is due in large measure to the development of the State educational systems, especially as regards the provision of secondary education. The heavy decline in attendance figures for the year 1919 was accounted for chiefly by the smaller attendance in New South Wales schools resultant on the influenza epidemic.

3. **Registration of Private Schools.**—Until recent years the various State Governments had comparatively little control over privately conducted schools. With the advance of modern educational thought the position is improving, but still leaves much to be desired. It is evident that without a thorough system of registration there will always be a difficulty in regard to enforcing the compulsory clauses of the various Education Acts. Moreover, advanced educational thought demands complete supervision, not only of curricula, but of all matters pertaining to school hygiene.

In New South Wales, under the provisions of the Bursary Endowment Act of 1912, non-State Schools are inspected by the departmental Inspector of Secondary Education for registration or renewal thereof. Under the compulsory clauses of the amending Public Instruction Act of 1916, children between the ages of 7 and 14 years must attend schools certified as efficient by the Minister. Provisional registration is granted to applicants pending inspection by Government officers. School proprietors must conform to prescribed conditions in regard to the hygiene, etc., of their buildings, and supply the requisite returns.

In Victoria, a registration scheme has been established under a special committee consisting of nine members of the Council of Education, and all Private Schools must be registered. The Minister of Education is also empowered to authorize the inspection of any school (other than a State School) in order to ascertain whether the instruction given is satisfactory. The inspector of registered schools has pointed out that the Registration Act has had the effect of improving the school buildings as well as the methods of instruction. Since 1914, the improvement of existing buildings has been enforced where necessary, while full requirements have been insisted on in the case of additions or new buildings.

In Queensland, with the exception of the Grammar Schools, which are now examined annually, there is practically no control over the private schools, beyond the fact that they may submit themselves to inspection if so desired. No provision is made under the Education Act for the furnishing of returns.

In South Australia there is no compulsory registration of schools or teachers, but all instruction must be given in the English language, and monthly and annual returns of attendance forwarded to the Department of Education.

In Western Australia, non-Government schools must be declared efficient by the Education Department if attendance at them is to be recognised as fulfilling the requirements of the law, and the school registers must be open to the inspection of the compulsory officers of the Department. Returns of attendance must be furnished monthly and quarterly.

In Tasmania all private schools must be registered with the Teachers and Schools Registration Board. Prior to registration by the Board teachers must produce evidence of fitness to teach. Annual returns of attendance are required.

### § 4. Free Kindergartens.

The following information regarding Free Kindergartens has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia, the details for which were furnished by the Education Department.

#### FREE KINDERGARTENS, 1922.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales (Sydney)	12	630	19	65	15
Victoria (Melbourne) ..	25	1,152	50	34	250
(Ballarat) ..	1	37	2	21	..
Queensland (Brisbane) ..	6	300	7	13	1
South Australia (Adelaide)	7	294	8	30	1
Western Australia (Perth)	4	45	6	..	..
Tasmania (Hobart) ..	3	112	5	3	..
(Launceston) ..	2	78	1	5	7
Total .. ..	60	2,648	98	171	274

In New South Wales there were 113 students at the Kindergarten Training College, of whom 65 were taking the ordinary course, 38 the course for Sunday School teachers, and 10 were attending special classes. At the Melbourne College, 11 second-year and 23 first-year students were in training. The Brisbane Training College had 13 students in training during 1922, the Training College at Adelaide 30, and at Perth 21. There is no training college at Hobart, but the free kindergartens are used as practising schools in connexion with the Kindergarten Association.

It must, of course, be distinctly understood that the information given above refers to institutions under private kindergarten unions or associations, and is exclusive of the kindergarten branches in the Government schools of the various States.

### § 5. Universities.

1. *Origin and Development.*—(i) *University of Sydney.* The Act of Incorporation of the University of Sydney received Royal Assent on the 1st October, 1850, and the first Senate was appointed on the 24th December of that year. The first matriculation examination was held in October, 1852, when 24 candidates passed the required test, and the formal inauguration ceremony took place on the 11th October of the same year. A Royal Charter was granted to the University on the 27th February, 1858. Women students were admitted in 1881. The passing of the University (Amendment) Act of 1912 marks an important epoch in the development of the educational system of New South Wales. The Act aims at placing the University in a more effective position as the culminating point in a thoroughly co-ordinated system of State education, and it is claimed that the passing of this measure made the educational system—from the Primary Schools through the Secondary Schools to the Technical Colleges or to the University—form a progressive and continuous whole. More extended reference to this Act and to the liberal scheme of exhibitions provided thereunder for scholars from the State and Private Schools was given in Official Year Book No. 15, page 745. At the inception of the University there were only three professorships. The present staff consists of 30 professors, 7 associate and 2 assistant professors, and 148 lecturers and demonstrators. There are in addition, 15 honorary lecturers, as well as 82 miscellaneous assistants in laboratories, and 3 curators of museums. The library and administrative staff numbers 27.

(ii) *University of Melbourne.* This institution was established by Act of Parliament assented to on the 22nd January, 1853, and its first council was appointed on the 11th April of that year. The foundation stone of the main building was laid on the 3rd July, 1854, and the University was formally inaugurated on the 13th April, 1855. By Royal Letters Patent, issued in 1859, its degrees are, like those of the Sydney institution, declared of equal status with those of any other University in the British Empire. Women

students attended lectures for the first time in 1881. The University, which began in 1855 with schools of Arts and Law, has now a staff of 24 professors, 75 lecturers and demonstrators, and 134 various assistants. The Conservatorium of Music has a staff numbering 40.

(iii) *University of Queensland.* The Act to establish the University of Queensland was passed in 1909, and the first Senate was appointed on the 14th April, 1910. The University was opened on the 14th March, 1911, when 60 students were matriculated. Provision has been made for a Correspondence Study department in connexion with the institution, and at the request of the Brisbane branch of the Workers' Educational Association weekly lectures are given in History and Economics. At the present time there are 8 professors, with 12 independent lecturers, 5 assistant lecturers and demonstrators, and 3 miscellaneous assistants. The Correspondence department had 152 students on the roll in 1921.

(iv) *University of Adelaide.* This University was established by Act of Parliament in 1874. Its origin and progress were largely due to the munificence of the late Sir Walter Watson Hughes and Sir Thomas Elder, G.C.M.G., the total gifts of the latter amounting to over £100,000. The academical work of the institution was commenced in March, 1876, when eight matriculated and fifty-two non-graduating students attended lectures. The foundation stone of the University buildings was laid on the 30th July, 1879, and the buildings were opened in April, 1882. In 1881, by Royal Letters Patent, the degrees granted by the institution were recognized as of equal distinction with those of any University in the British Empire. The Elder Conservatorium of Music was opened in 1898. Power was given by Act of Parliament in 1880 to grant degrees to women. At first there were only four professorships in the University, whereas the present staff consists of 16 professors, 91 lecturers and demonstrators, and 49 miscellaneous assistants, while the staff at the Conservatorium, not included in the foregoing figures, numbers 22.

(v) *University of Western Australia.* The University of Western Australia was established under an Act which received Royal assent on the 16th February, 1911, and the first Senate was appointed on the 13th February, 1912. The University was opened in March, 1913. There are now 10 professors, in addition to 20 lecturers and demonstrators and 11 miscellaneous assistants. The Chair of Agriculture was endowed by Sir Winthrop Hackett. Associates of the Perth Technical School or the Kalgoorlie School of Mines may, under prescribed conditions, obtain a reduction in period of attendance for the B.E. degree, and students from the School of Mines may be admitted to the examinations and take portion of their course at the University.

(vi) *University of Tasmania.* The Act to establish the University of Tasmania (Hobart) was assented to on the 5th of December, 1889. At the present time the institution, which is small but efficient, possesses a staff of 7 professors, 11 independent lecturers, and 1 assistant lecturer and demonstrator. Under Statutes the Zeehan School of Mines and Metallurgy and the School of Mines and Industries at Mount Lyell were affiliated to the University.

2. *Teachers and Students.*—The following table shows the number of professors and lecturers, and the students in attendance at each of the State Universities during the year 1921 :—

UNIVERSITIES.—TEACHERS AND STUDENTS, 1921.

University.	Professors.	Lecturers and Demonstrators.	Students attending Lectures.		
			Matriculated.	Non-matriculated.	Total.
Sydney .. .. .	39	163	2,753	564	3,317
Melbourne .. .. .	24	75	..	..	2,476(a)
Queensland (Brisbane) .. .. .	8	17	245	71	316
Adelaide .. .. .	16	91	794	539	1,333(b)
Western Australia (Perth) .. .. .	10	20	325	28	353
Tasmania (Hobart) .. .. .	7	12	127	41	168

(a) Exclusive of 178 music students.

(b) Exclusive of 588 music students.

Students at the Conservatorium of Music have been excluded in the case of Melbourne and Adelaide. The Conservatorium in Sydney, while attached to the Education Department, is not under the control of the University.

3. **University Revenue.**—The income of the Universities from all sources during the year 1921 was as follows :—

## UNIVERSITIES.—REVENUE, 1921.

University.	Government. Grants.	Fees.	Private Foundations.	Other.	Total.
	£	£	£	£	£
Sydney .. .. .	129,512	41,731	59,543	2,713	233,499
Melbourne .. ..	38,912	71,578	7,690	5,834	124,014
Queensland (Brisbane) ..	16,400	7,422	11,402	573	35,797
Adelaide .. .. .	34,860	20,171	36,063	588	91,682
Western Australia (Perth)	15,000	2,957	660	1,757	20,374
Tasmania (Hobart) ..	12,690	2,784	845	185	16,504

The extent to which the older-established Universities have benefited by private munificence will be apparent from the following table :—

## UNIVERSITIES.—BENEFACTIONS.

University of Sydney.		University of Melbourne.		University of Adelaide.	
Donor.	Amount.	Donor.	Amount.	Donor.	Amount.
	£		£		£
J. H. Challis ..	276,750	Sir Samuel Wilson ..	30,000	Sir Thos. Elder ..	98,760
Sir P. N. Russell ..	100,000	James Stewart ..	25,624	Sir Langdon	
Thos. Fisher ..	30,000	Hon. Francis Ormond	20,000	Bonython ..	40,000
Hugh Dixon ..	8,050	John Hastie ..	19,140	R. Barr Smith	
Edwin Dalton ..	8,000	Robert Dixon ..	10,837	and family ..	21,150
J. F. Archibald ..	7,135	John Dixon Wyse-		Sir W. Hughes ..	20,000
Hon. Sir W. Macleay ..	6,000	laskie ..	8,400	Family of John	
Mrs. Hovell ..	6,000	David Kay ..	5,764	Darling ..	15,000
Thos. Walker ..	6,200	Cuming Smith & Co.		Mrs. G. A. Jury	12,000
Other donations ..	59,868	Ltd. ..	5,250	Hon. J. H. Angas	10,000
		Subscribers, Ormond		Other donations	29,168
		Exhibition in Music	5,217		
		Sir J. M. and Lady			
		Higgins ..	5,200		
		Mr. and Mrs. F. Knight	5,000		
		Henry Dwight ..	5,000		
		Wm. Thos. Mollison ..	5,000		
		Other donations ..	88,428		
Total ..	508,003	Total ..	238,860	Total ..	246,078

The figures quoted above for the Sydney University relate to actual cash, and are exclusive of the munificent bequest by the late Hon. Sir Samuel McCaughey, M.L.C., of property producing an annual income of £15,000 to be applied to the general purposes of the University. In addition to the sum of £6,000 shown above, the Hon. Sir W. Macleay also presented the Museum of Natural History to the University of Sydney. The column "Other Donations" for Melbourne University includes portion of the sum of £49,000 raised by special appeal in 1920.

The credit balances of some of the above endowments now amount to very considerable sums. For example, on the 31st December, 1921, the Challis Fund amounted to nearly £326,000, and the Fisher bequest to over £40,000. The cash balance at the end of 1921 on account of all private foundations to Sydney University stood at £597,846. In the case of Melbourne University the Stewart fund on the 31st December, 1921, stood at £30,461, the Hastie at £19,262, and the Dixon fund at £15,736.

In addition to the above there were various other bequests to Sydney University—*e.g.*, collection of Egyptian antiquities, etc., by Sir Charles Nicholson, and Natural History collection by Mr. Geo. Masters, while the building for the Natural History Museum was given by Sir W. Macleay. Numerous prizes and scholarships have also been given to the various colleges. In Melbourne, the Hon. Francis Ormond's benefactions to Ormond College amounted to about £108,000. With a view to advancing the cause of education in agriculture, forestry and allied subjects, Mr. Peter Waite transferred to the Adelaide University in 1914 the whole of the valuable Urrbrae estate at Glen Osmond. The estate comprises 134 acres of land with a fine mansion. In 1915, he presented the estate of Claremont and part of Netherby, comprising 165 acres, adjoining Urrbrae, while in 1918 he transferred to the University 5,880 shares in a public company to provide funds to enable the University to utilize the land for the purposes intended. Private benefactions to the University of Tasmania and the University of Queensland amount to about £5,000 and £37,000 respectively. In connexion with the latter, the trustees of the Walter and Eliza Hall Trust have endowed fellowships in engineering, economic biology, and pure and applied chemistry. The bequest by the late Sir Samuel McCaughey amounted in 1921 to £15,660, and a gift of £10,000 by the British Red Cross Society was used to create a Research Chair in Medical Psychology. The trustees also provided a Veterinary Science Research Fellowship at Melbourne University. In Western Australia the chair of Agriculture was founded by an endowment of Sir Winthrop Hackett, first Chancellor of the University, who made available also an annual sum of £900 for the establishment of a Department of Agriculture.

4. **University Expenditure.**—For the year 1921 the expenditure by the Universities under various headings was as follows:—

#### UNIVERSITIES.—EXPENDITURE, 1921.

University.	Salaries and Administration.	Scholarships, Bursaries, etc.	General Maintenance.	Buildings and Grounds.	Other.	Total.
	£	£	£	£	£	£
Sydney .. ..	116,505	6,499	41,510	30,722	15,815	211,051
Melbourne .. ..	79,877	8,914	8,116	9,606	22,306(a)	128,819
Queensland (Brisbane) ..	20,466	3,047	6,650	1,639	2,139(d)	33,941
Adelaide .. ..	38,506	1,103	1,008	38,191	13,984(b)	92,792
Western Australia (Perth)	15,398	148	300	..	6,403(c)	22,249
Tasmania (Hobart) ..	10,493	938	264	689	3,762	16,146

(a) Includes £11,222 laboratory and research expenditure.  
research.

(c) Includes £2,070 laboratory and research.

(b) Includes £7,300 laboratory and research.  
(d) Laboratory and research.

5. **University Extension.**—Extension lectures were instituted at Sydney University in 1886, and in 1892 a Board was appointed which receives and considers applications from country centres, and makes provision for engaging lecturers and managing the entire business connected with the various courses. The Board also arranges for courses of lectures in other States. In 1921 provision was made for fourteen courses, the lectures being given in part at the University, and in part in various suburban and country districts.

Evening tutorial classes open to both matriculated and unmatriculated students have been established in various centres in accordance with the University Amendment Act of 1912. Fifty-six of these classes, attended by about 1,300 students, were in operation during 1921. Thirty of these classes were held in the metropolitan area, and twenty-six in country districts.

University extension lectures in Victoria date from the year 1891, when a Board was appointed by the Melbourne University for the purpose of appointing lecturers and holding classes and examinations at such places and in such subjects as it might think fit. A joint committee composed of representatives from the Extension Board and the Workers' Educational Association respectively controls the organization of tutorial classes. The Board also arranges for advising country students by correspondence on social and cultural subjects. Attendance at extension lectures in 1921 numbered 2,712, and at the tutorial classes 392.

As pointed out previously, a correspondence study department has been inaugurated in connexion with the University of Queensland in order to overcome, as far as possible, the difficulties of students who desire to benefit by University teaching, but who for various reasons are unable to attend the lectures. Over 150 students are on the roll. In addition, 10 public lecturers, and 3 intra-mural courses were given in Brisbane, and 19 lectures in country towns, while 8 classes were conducted in Brisbane for members of the Workers' Educational Association, and 2 study circles in the country were supplied with copies of lectures in industrial history.

The Adelaide University has also instituted short courses of extension lectures in Arts and Science, to which students are admitted on payment of a nominal fee. Public intimation of these lectures is made from time to time during the session. Attendance at tutorial classes and lecture courses in 1921 amounted to 400.

In Western Australia provision has been made for the giving of courses of extension lectures in Perth and suburbs, and also—by arrangement with local committees—in country centres. The professor of agriculture visits the chief farming districts for the purpose of giving lectures to, and holding conferences with the primary producers. Special short courses for farmers are given at the University. Short courses of popular lectures are also given in the evening by various professors at the University.

In 1919 the University Extension Board which had previously controlled the work of providing extra-mural tuition was replaced by the Committee for Tutorial Classes. The Professor of Economics is director of tutorial classes, and conducts one class annually. There are also lectureships for the northern and west coast districts. Attendance at the classes in 1921 numbered 129.

**6. Workers' Educational Association.**—In 1913 Workers' Educational Associations were formed in all the States of Australia and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people and thereby providing for the higher education of the workers in civic and cultural subjects. The work of the Association is gaining in popularity year by year, and the growth of the movement has been phenomenal. The Government of New South Wales at first granted the University of Sydney the sum of £1,000 to initiate a scheme for tutorial classes. There are now direct grants from all State Governments except Western Australia, and an additional University grant in New Zealand. The particulars of grants for classes are as follow:—New South Wales, £5,650, 56 classes; Victoria, £2,250, 22 classes; Tasmania, £2,105, 17 classes; South Australia, £1,600, 12 classes; Queensland, £1,000, 8 classes. The total number of students throughout Australia is approximately 4,000, the greater number of whom are taking three-year courses while working at their daily occupations. An analysis of these occupations showed that the great majority of the students were wage-earners. The principal subjects chosen in all States are Industrial History, Economics, Political Science, and Sociology, but there is an increasing number of classes in other subjects such as History, Psychology, Philosophy, Literature, Music, Physiology, and Biology. Each University co-operates with the W.E.A. in the formation of a joint committee which appoints tutors and generally supervises the work with the assistance of a University officer with the title of Director of Tutorial Classes. In addition to the longer and more serious courses, a great many preparatory classes, study circles, and summer schools are organized by the Association, numerous courses of public lectures are delivered, educational conferences promoted, and an extensive book service is spreading educational literature throughout Australia. A strong feature of the work of the Association is the organization of a number of country branches to carry facilities for higher education to districts in which these have hitherto been lacking. This work has been particularly successful in New South Wales, Victoria, and Tasmania. In New South Wales the Association organized an important representative conference on "Trade Unionism in Australia" in 1915, the report of which has been issued in book form. Another conference on the "Teaching of Sex Hygiene" was held in 1916, the report

of which has passed through two large editions. A Commonwealth Conference held at Adelaide in 1918 resulted in the formation of a federal organization now known as "The Workers' Educational Association of Australia." Its central office is in the Education Department, Melbourne. The Federal Council co-ordinates the activities of the W.E.A. in all States, and has inaugurated a series of publications on sociological and economic subjects. It also publishes "The Highway," a monthly magazine now in its fifth year, which contains notes on the movement and general discussions on educational work.

### § 6. Technical Education.

1. **General.**—Although provision has been made in some of the States in respect to many necessary forms of technical education, the total provision made would imply that this branch of education has not been regarded as of great importance. As will be seen later on, the expenditure on technical education for the whole of Australia is comparatively small. The question of apprenticeship is referred to in the chapter dealing with "Manufacturing Industries."

2. **New South Wales.**—Some account of the origin and development of technical education in New South Wales was given in Official Year Book No. 15, page 750, but considerations of space preclude its repetition in this issue. It may be noted, however, that technical education had its origin in this State in 1883, but it was not until the year 1913 that a definitely co-ordinated scheme was adopted. The branch Technical Colleges, with the exception of those at Newcastle and Broken Hill, were then superseded by Trade Schools, admission to which was restricted to those actively engaged in the trade concerned, and was dependent also on the possession of a certain degree of preparatory knowledge. Courses of instruction in which workshop experience is not necessary to train the efficient worker—such as Art, Science, and Commercial Courses—are, however, open to all students who have the requisite preliminary knowledge. Advisory committees were appointed for each trade or group of trades. The first two or three years' course of instruction is given in the Trade Schools, of which there are ten, and students may then go on for a further two or three years' advanced teaching at the Technical Colleges, of which there are three, one at Sydney, one at Newcastle, and one at Broken Hill. The higher courses embrace instruction in advanced trades' work qualifying for the position of manager or foreman, but no attempt is made to train for the professional standing. It is hoped, however, that the scheme will develop so that part of the graduates may proceed to the University. Admission to the higher courses will eventually be restricted to those who have either graduated in the Trade Schools of the Department, or who evidence possession of a similar standard of knowledge. In addition to the courses given in the Technical Colleges and Trade Schools, elementary instruction has been provided at various centres where there has been a demand for it, and provision has been made also for special courses of instruction by correspondence. A liberal scheme of scholarships has been provided for students passing from the day or evening Junior Technical Schools or Domestic Science Schools, to the Trades and Science Schools, as well as scholarships to the University at the close of the diploma course.

As the existing accommodation both at the Central College and the suburban Trade Schools was found to be quite inadequate, a beginning was made in 1921 with the work of providing increased facilities for technical education in the metropolis by remodelling the premises formerly used as the Darlinghurst Gaol. The necessary alterations will involve a sum of £36,650.

The table below gives some idea of the development of technical education in New South Wales during the five years 1917 to 1921:—

TECHNICAL EDUCATION.—NEW SOUTH WALES, 1917 TO 1921.

Year.	Number of Classes.	Number of Enrolments.	Average Weekly Attendance.	Individual Students.	Number of Lecturers and Teachers.	Fees Received.
						£
1917 ..	544	15,065	11,072	8,401	354	9,354
1918 ..	572	15,986	12,156	8,717	369	9,422
1919 ..	557	14,580	10,949	7,827	379	9,416
1920 ..	638	18,119	13,808	9,258	406	12,701
1921 ..	636	18,974	..	9,696	402	12,641

Attention has recently been drawn to the necessity for a Vocational Bureau to make provision for effectively placing in the various industries boys and girls leaving school. At present many of the students at the Technical Colleges are anxious to be apprenticed, but there is a difficulty in bringing the interested parties together.

During the year 1921 the Department continued to train large numbers of returned soldiers at the Central Technical College and various Trade Schools in the metropolitan area, and at the branch Technical Colleges at Newcastle and Broken Hill. The numbers are, of course, decreasing as the men become absorbed into different industries, the total under training at the end of 1921 being 1,174.

3. **Victoria.**—Technical instruction in mining has for many years received considerable attention in Victoria, the Ballarat School of Mines, which was established as far back as 1870, having achieved an Australasian reputation. Fine work was also done at the School of Mines in Bendigo, and later on excellent courses of training were evolved at the Working Men's College in Melbourne. The general scheme of instruction, however, lacked cohesion, and it was not until after the publication of the Report of the Royal Commission on Technical Education, which was appointed in 1899, that many defects were remedied. Prior to 1910 the whole of the schools were under the control of local councils, but in the year mentioned the control passed to the Education Department. At the end of 1921 there were 25 Technical Schools receiving State aid. The largest technical institution in Melbourne is the Working Men's College, founded in 1887. The College, in addition to giving instruction in a large number of technical subjects, is also a School of Mines. During 1921 the classes in operation numbered 180, and the average enrolments per term averaged 2,600. In addition, 230 students were receiving vocational training for the Repatriation Department. Such institutions as the Swinburne Technical College, and the Ballarat and Bendigo Schools of Mines, have also an extensive curriculum embracing the more important industrial subjects. There are now 20 Junior Technical Schools in existence, giving a two or three years' course of instruction to boys between the ages of 12½ and 15 years, thereby preparing them for the more advanced teaching in the higher schools.

Particulars regarding the growth of technical education in Victoria during the last five years are given in the appended table:—

TECHNICAL EDUCATION.—VICTORIA, 1917 TO 1921.

Year.				Number of Classes.	Number of Enrolments.	Average Attendance.	Fees Received.
							£
1917	..	..	..	106	12,139	8,736	18,836
1918	..	..	..	110	13,300	9,119	19,044
1919	..	..	..	110	12,785	9,102	18,351
1920	..	..	..	115	14,174	10,548	29,132
1921	..	..	..	116	15,105	10,663	25,831

Considerably more than 2,000 returned soldiers have received the advantages of vocational training, and the staff and councils of the various technical schools have taken great interest in the work of teaching and finding employment for qualified trainees.

4. **Queensland.**—Up to the passing of the "Technical Instruction Act of 1908," technical education in Queensland was controlled by local committees, the State simply providing financial aid. Under the provisions of this Act, the State took over the technical colleges at Brisbane, South Brisbane and West End, and formed therefrom a Central Technical College. By an amending Act in 1918, power was taken to assume the control of other technical institutions, and in 1919 the colleges at Toowoomba and Rockhampton came under departmental control. During 1921 there were seventeen technical colleges in operation, while classes in technical subjects are held in a number of smaller centres. Preparatory Day Trade Schools were established at Ipswich and Brisbane in 1916, and Domestic Science Day Schools at Brisbane and Ipswich in 1915, and at Townsville in 1918. A certain amount of technical and vocational work is also provided for at the Rural Schools. (See § 2, 4 (v.c.)). Several itinerant Domestic Schools have been opened to meet the needs of districts where the population is not sufficient to warrant the establishment of permanent classes, and these institutions have been very successful. Vocational



training for returned soldiers has been provided in Brisbane and at various country centres. The progress of technical education since 1917 is shown in the following table :—

**TECHNICAL EDUCATION.—QUEENSLAND, 1917 TO 1921.**

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1917 .. ..	388	9,632	7,800	310	15,274
1918 .. ..	421	9,900	8,500	295	14,851
1919 .. ..	423	9,864	(a) 8,000	348	11,364
1920 .. ..	509	11,863	(a) 9,000	377	13,074
1921 .. ..	522	11,993	(a) 9,500	372	13,882

(a) Estimated.

Greater attention is being devoted to the development of trade classes, and the Technical College authorities have been assisted by the University professors in the preparation of a properly organized system of Trade instruction. Compulsory attendance at technical classes in various districts has been provided for by industrial awards, the decisions so far—with the exception of Printing—being confined to trades connected with Engineering and Metal Working. Under the scheme inaugurated in 1920, there is a Central Apprenticeship Committee and Group Apprenticeship Committees, which exercise oversight over apprenticeship matters and submit recommendations as to conditions to the Arbitration Court.

5. *South Australia.*—Prior to the year 1917 the condition of affairs in regard to technical education in Australia was regarded by the Education Department as unsatisfactory. There was a School of Mines and Industries in Adelaide, and in addition Schools of Mines at Moonta, Port Pirie, Kapunda, Mount Gambier, and Gawler. While the Government bore the bulk of the cost of maintenance of these institutions, they were controlled by independent councils, and there was no regular co-ordination in regard to staffs, curriculum, etc. A Director of Technical Education was appointed in 1916, and the reorganization of the system was thereupon undertaken. The position in 1921 was, however, still unsatisfactory, as the control of technical education in the State rested with two bodies, (a) the Council of the South Australian School of Mines and Industries, whose activities are confined to the metropolitan area; and (b) the technical branch of the Education Department, which deals with schools in the metropolis, as well as throughout the country districts. During the year, an amending Act dealing with the technical education of apprentices was passed, and, by proclamation, the scope of the original Act was widened so as to include over 150 separate trades. Regular meetings of the Apprentices Advisory Board were held, and improvements in conditions of apprenticeship were made on their recommendation. Since the opening of the classes formed in June, 1919, 707 apprentices and probationers have been enrolled. The enrolments in the five country technical schools in 1921 numbered 1470.

The work of training returned soldiers is now drawing to a close, and of the 1,270 enrolments in the technical classes only 32 remained at the end of 1921.

Particulars regarding the position of technical education in the State during the five years 1917 to 1921 are given hereunder :—

**TECHNICAL EDUCATION.—SOUTH AUSTRALIA, 1917 TO 1921.**

Year.	Number of Classes.	Enrolments.	Average Attendance.	Number of Teachers.	Fees Received.
					£
1917 .. ..	195	6,273	5,307	105	3,974
1918 .. ..	169	5,927	4,760	127	4,393
1919 .. ..	207	6,819	4,453	134	4,177
1920 .. ..	358	11,304	8,424	200	5,161
1921 .. ..	357	10,499	7,187	183	5,713

6. **Western Australia.**—A Technical School was established at Perth in 1900, and since its opening has progressed rapidly. Extensive additions to the buildings were made in 1909, and the remodelled institution was opened in 1910. The school is affiliated to the University, and provides instruction for evening students in first year University work in mathematics, physics, and chemistry, and second year work in mathematics and chemistry. Full time day classes in engineering are provided for pupils who have passed through the Junior Technical School, and the Midland Junction Railway Workshops recruit their apprentices largely from these classes. There are branch institutions at Midland Junction, Fremantle, Claremont, Kalgoorlie, Boulder, Geraldton, Bunbury, Collie, Coolgardie, and Albany. In addition, Continuation Classes are held at various centres. The schools are all under the control of the Education Department, the officer entrusted with the supervision being styled Director of Technical Education. The Director also supervises the School of Mines at Kalgoorlie, which is controlled by the Mines Department. Advanced work at present is taken only in Perth, Fremantle, Boulder, and in Kalgoorlie by the School of Mines, the other branches dealing almost entirely with preparatory work, chiefly in Continuation Classes.

In 1918 a vocational training committee was formed to superintend the training of returned soldiers, and some 2,000 men were interviewed and advised by the Committee before a Special Selection Officer was appointed in October, 1919. Originally it was proposed to train disabled men only, but later it was decided to extend the privilege to all returned soldiers who were under 20 years of age at the time of enlistment. Provision was made for accommodating the classes in the Technical School and in workshops and other premises built or rented in various parts of the metropolis.

At present pupils leaving the State Schools at the age of fourteen to take up employment may by attendance at evening classes qualify for free admission to the Technical Schools. Those with leaving certificates from the eighth standard, and others able to devote their full time to study, may obtain day instruction at the Technical Schools in subjects bearing on their intended occupations, or may qualify for a more extended course, including graduation at the University. Returns for the last five years are embodied in the table hereunder :—

TECHNICAL EDUCATION.—WESTERN AUSTRALIA, 1917 TO 1921.

Year.	Number of Classes.	Enrolments.	Individual Students.	Number of Teachers.	Fees Received.
					£
1917 .. ..	439	5,100	2,767	120	1,083
1918 .. ..	435	5,853	3,320	127	920
1919 .. ..	463	5,713	3,337	130	842
1920 .. ..	455	5,424	3,158	151	976
1921 .. ..	461	6,773	3,466	145	1,920

7. **Tasmania.**—Provision for technical education dates from the year 1888, but in the report of the Commission appointed in 1916 to inquire into the condition of technical education in Tasmania, allusion was made to the want of co-ordination between existing institutions and the Education Department, and it was recommended that the schools should be taken over by the Government, and a trained technologist appointed as organizing inspector. The inspector was appointed in 1917 and a Technical Education Branch was established in 1918. The scheme of technical education includes provision for courses of training in industrial, commercial, and domestic pursuits. Under the first-mentioned, the scheme provides for junior technical schools, applied science schools, technical trade schools, and art and applied art schools, and it is to this group that the activities of the Department have hitherto been almost exclusively confined. The co-operation of employers and employees has been obtained, and certain of the more advanced courses have been co-ordinated with the courses given at the University. There are Junior Technical Schools for boys at Hobart and Launceston, and for boys and girls at Queenstown and Zeehan. Senior Technical Schools are in operation at Hobart and Launceston, organized into Departments of Engineering and Applied Science, Art, and Trade; and at Queenstown and Zeehan, courses in Metallurgical and Mining Engineering are undertaken. Vocational classes for returned soldiers were established at Hobart and Launceston, and the training scheme was completed at the end of 1921.

## TECHNICAL EDUCATION.—TASMANIA, 1917 TO 1921.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1917 .. .. .	68	829	470	38	871
1918 .. .. .	68	836	472	38	878
1919 .. .. .	107	752	478	56	784
1920 .. .. .	135	1,152	784	63	1,338
1921 .. .. .	167	1,218	860	65	1,286

8. **Expenditure on Technical Education.**—The expenditure on technical education in each State during the period 1917 to 1921 is shown below :—

## TECHNICAL EDUCATION.—EXPENDITURE, 1917 TO 1921.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
1917 { (a)	90,633	88,058	37,906	20,265	10,872	3,915	251,649
{ (b)	20,163	10,603	4,599	2,637	672	..	38,674
1918 { (a)	99,275	102,287	41,566	24,363	13,444	4,738	285,673
{ (b)	10,651	30,656	9,931	7,706	492	..	59,436
1919 { (a)	115,087	115,383	44,285	26,580	14,047	10,335	325,717
{ (b)	6,302	8,083	10,180	3,586	569	..	28,720
1920 { (a)	211,987	118,168	57,219	34,538	16,326	13,677	451,915
{ (b)	2,668	9,326	22,607	13,080	494	328	48,503
1921 { (a)	210,515	162,596	62,321	40,864	19,212	17,808	513,316
{ (b)	13,972	29,619	4,854	4,172	580	259	53,456

(a) Maintenance.

(b) Buildings.

The expenditure on maintenance for technical education in 1921 amounted to 1s. 11d. per head of the population of the Commonwealth, as compared with 25s. 7d. per head expended on maintenance for primary education, and apparently shows that technical education has not attained its proper place in the educational organization of Australia.

## § 7. Business Colleges and Shorthand Schools.

There has been considerable development in recent years both in the number and scope of privately conducted institutions which aim at giving instruction in business methods, shorthand, typewriting, the use of calculating machines, etc. Particulars for all States excepting Queensland are given in the following table :—

## BUSINESS COLLEGES, SHORTHAND SCHOOLS, ETC., 1921.

State.	Schools.	Teachers.	Students Enrolled.		Average Attendances.		Fees Received.
			Males.	Females.	Males.	Females.	
New South Wales ..	16	114	3,233	4,102	826	2,006	£ 41,317
Victoria ..	17	178	3,871	2,512	2,616	1,917	(b)
Queensland(a) ..	..	..	..	..	..	..	..
South Australia ..	6	44	801	1,118	454	588	12,582
Western Australia	13	65	1,093	1,005	(b)	(b)	16,845
Tasmania ..	3	14	215	257	144	140	3,408

(a) Included in private schools.

(b) Not available.

The figures for New South Wales are exclusive of students instructed at home through the medium of correspondence classes.

In Victoria it is explained that the preponderance of male students is due to the larger enrolment of males in the correspondence classes.

### § 8. Diffusion of Education.

1. **General Education.**—A rough indication of the state of education of the people is obtained at each Census under the three headings, "read and write," "read only," and "cannot read." The grouping of the whole population, exclusive of aborigines, in these three divisions is given for each Census since 1871 :—

#### EDUCATION AT CENSUS PERIODS, 1871 TO 1921.

State or Territory.		1871.	1881.	1891.	1901.	1911.	1921.
N.S.W.	Read & write	296,741	507,067	835,562	1,071,935	1,380,196	1,760,435
	Read only..	56,391	49,372	43,539	29,728	6,557	5,868
	Cannot read	149,866	193,386	244,853	253,183	259,981	334,068
(a)	Read & write	478,464	653,346	908,490	998,010	1,136,189	1,331,621
	Read only..	70,953	47,950	32,794	21,852	4,741	3,238
	Cannot read	180,781	160,270	198,556	181,208	174,621	196,421
Victoria	Read & write	74,940	136,436	276,381	376,294	508,584	633,338
	Read only..	12,080	13,657	14,618	11,737	3,542	3,108
	Cannot read	33,084	63,432	102,719	110,098	93,687	119,526
Q'land	Read & write	117,349	200,057	236,514	290,748	344,398	421,025
	Read only..	21,509	15,267	9,571	8,283	1,812	1,643
	Cannot read	46,768	64,541	74,346	64,126	62,348	72,492
S. Aust.	Read & write	14,166	19,684	34,254	150,099	237,605	283,344
	Read only..	2,717	2,430	2,061	3,107	972	890
	Cannot read	7,902	7,594	13,467	30,918	43,537	48,498
(b)	Read & write	55,941	74,966	103,138	133,579	155,447	175,435
	Read only..	13,946	9,606	6,287	3,907	925	610
	Cannot read	29,441	31,133	37,242	34,989	34,839	37,735
W. Aust.	Read & write	..	..	..	..	2,408	2,832
	Read only..	..	..	..	..	36	15
	Cannot read	..	..	..	..	866	1,020
Tasm'nia	Read & write	..	..	..	..	1,424	2,093
	Read only..	..	..	..	..	14	8
	Cannot read	..	..	..	..	276	471
Northern Ter.(c)	Read & write	1,037,601	1,591,556	2,394,339	3,020,665	3,766,251	4,610,123
	Read only..	177,596	138,282	108,870	78,614	18,599	15,380
	Cannot read	447,842	520,356	671,183	674,522	670,155	810,231
Federal Ter.(d)	Read & write	..	..	..	..	..	..
	Read only..	..	..	..	..	..	..
	Cannot read	..	..	..	..	..	..
C'wealth	Read & write	1,037,601	1,591,556	2,394,339	3,020,665	3,766,251	4,610,123
	Read only..	177,596	138,282	108,870	78,614	18,599	15,380
	Cannot read	447,842	520,356	671,183	674,522	670,155	810,231

(a) Including Federal Territory prior to 1911.

(b) Including Northern Territory prior to 1911.

(c) Included in South Australia prior to 1911.

(d) Included in New South Wales prior to 1911.

It will of course be understood that the heading "cannot read" includes a large proportion of children under five years of age.

The proportion in Australia of the various classes per 10,000 of the population is shown below for each Census period :—

#### PROPORTION OF EDUCATED AND ILLITERATE PER 10,000 PERSONS, 1871 TO 1921.

(AUSTRALIA.)

Division.		1871.	1881.	1891.	1901.	1911.	1921.
Read and write	.. ..	6,239	7,073	7,543	8,004	8,454	8,481
Read only	.. ..	1,068	615	343	208	42	28
Cannot read	.. ..	2,693	2,312	2,114	1,788	1,504	1,491

As pointed out previously, the "cannot read" group includes a large proportion of children under five years of age.

2. **Education of Children.**—The figures in the preceding tables refer to the entire population of Australia, and as the age constitution of those dwelling in the various portions thereof underwent considerable modifications during the period dealt with, a far more reliable test of the diffusion of education will be obtained by a comparison of the Census returns in regard to children of school age. For comparative purposes this has been taken to include all children in the group over five and under fifteen years of age, and the degree of education of these at each Census from 1861 to 1911 will be found below. Similar particulars for the Census of 1921 are not yet available.

### EDUCATION OF CHILDREN OF SCHOOL AGE AT CENSUS PERIODS, 1861 TO 1911.

State or Territory.	1861.	1871.	1881.	1891.	1901.	1911.
N.S.W. <sup>a</sup>						
{ Read & write	34,040	68,776	121,735	196,240	251,187	291,450
{ Read only..	20,345	26,886	25,100	21,375	15,934	993
{ Cannot read	25,472	32,924	41,663	48,580	60,734	34,793
Victoria						
{ Read & write	42,268	122,739	170,713	201,199	236,515	237,028
{ Read only..	25,518	39,636	25,249	15,656	13,128	410
{ Cannot read	19,341	29,490	21,421	27,441	27,765	19,621
Q'land						
{ Read & write	2,156	12,698	33,317	62,402	95,635	117,347
{ Read only..	1,534	6,104	7,019	7,580	5,955	616
{ Cannot read	1,629	6,015	9,615	16,257	18,827	8,633
S. Aust. <sup>b</sup>						
{ Read & write	15,485	30,608	46,630	58,291	69,451	69,878
{ Read only..	8,748	12,432	7,926	4,618	4,229	248
{ Cannot read	6,907	10,074	12,483	17,988	15,480	9,638
W. Aust.						
{ Read & write	1,333	3,218	4,418	6,910	25,326	47,568
{ Read only..	226	617	1,260	933	1,815	159
{ Cannot read	1,015	1,795	1,593	2,348	5,431	5,234
Tasm'nia						
{ Read & write	11,919	17,335	17,188	24,007	32,890	36,351
{ Read only..	2,848	4,143	4,108	2,974	1,795	186
{ Cannot read	4,581	6,663	6,606	8,829	8,475	5,575
Northern Ter. <sup>c</sup>						
{ Read & write	..	..	..	..	..	195
{ Read only..	..	..	..	..	..	..
{ Cannot read	..	..	..	..	..	118
Federal Ter. <sup>d</sup>						
{ Read & write	..	..	..	..	..	322
{ Read only..	..	..	..	..	..	2
{ Cannot read	..	..	..	..	..	47
C'wealth						
{ Read & write	107,201	255,374	394,001	549,049	711,004	800,139
{ Read only..	59,219	89,818	70,662	53,136	42,856	2,614
{ Cannot read	58,945	86,961	93,381	121,443	136,712	83,659

(a) Including Federal Territory prior to 1911.

(c) Included in South Australia prior to 1911.

(b) Including Northern Territory prior to 1911.

(d) Included in New South Wales prior to 1911.

In the case of Tasmania full details for the years 1861 and 1871 are not available and the figures for those years are approximate. The variation in degree of education may be more readily seen by reducing the foregoing figures to the basis of proportion per 10,000, and the results so obtained are embodied in the following table, a glance at which is sufficient to demonstrate the remarkable strides that at least the lower branches of education have made since 1861. In that year, only 47 per cent. of the children of school age could read and write, while 26 per cent. were illiterate. The returns for 1911 show that the proportion of those who could read and write had increased to over 90 per cent., while the totally illiterate had declined by nearly two-thirds.

EDUCATION OF CHILDREN (AGES 5 TO 14) PER 10,000 AT CENSUS PERIODS,  
1861 TO 1911.

State or Territory.		1861.	1871.	1881.	1891.	1901.	1911.
N.S.W. <sup>a</sup>	Read & write	4,263	5,349	6,458	7,372	7,662	8,907
	Read only..	2,547	2,091	1,332	803	486	30
	Cannot read	3,190	2,560	2,210	1,825	1,852	1,063
Victoria	Read & write	4,851	6,397	7,853	8,236	8,526	9,221
	Read only..	2,929	2,066	1,162	641	473	16
	Cannot read	2,220	1,537	985	1,123	1,001	763
Q'land	Read & write	4,053	5,116	6,670	7,236	7,942	9,269
	Read only..	2,884	2,460	1,405	879	495	49
	Cannot read	3,063	2,424	1,925	1,885	1,563	682
S. Aust. <sup>b</sup>	Read & write	4,973	5,763	6,956	7,206	7,790	8,761
	Read only..	2,809	2,341	1,182	571	474	31
	Cannot read	2,218	1,896	1,862	2,223	1,736	1,208
W. Aust.	Read & write	5,179	5,716	6,076	6,780	7,775	8,982
	Read only..	878	1,096	1,733	916	557	30
	Cannot read	3,943	3,188	2,191	2,304	1,668	988
Tasm'nia	Read & write	6,160	6,160	6,160	6,704	7,620	8,632
	Read only..	1,472	1,472	1,472	830	416	44
	Cannot read	2,368	2,368	2,368	2,466	1,964	1,324
Northern Ter. <sup>c</sup>	Read & write	..	..	..	..	..	6,230
	Read only..	..	..	..	..	..	..
	Cannot read	..	..	..	..	..	3,770
Federal Ter. <sup>d</sup>	Read & write	..	..	..	..	..	9,868
	Read only..	..	..	..	..	..	5
	Cannot read	..	..	..	..	..	127
C'wealth	Read & write	4,757	5,910	7,061	7,588	7,984	9,027
	Read only..	2,628	2,078	1,266	734	481	29
	Cannot read	2,615	2,012	1,673	1,678	1,535	944

(a) Including Federal Territory prior to 1911.

(c) Including Northern Territory prior to 1911.

(b) Included in South Australia prior to 1911.

(d) Included in New South Wales prior to 1911.

3. Education as shown by Marriage Registers.—Another common method of testing the spread of education is to compare the number of mark signatures with the total number of persons married during each year of a series. The percentage of males and females signing with a mark to the total persons married in the Census years 1861 to 1921 was as follows :—

EDUCATION.—MARRIAGE SIGNATURES, AUSTRALIA, 1861 TO 1921.

Proportion Signing with Marks of Total Persons Married.				Proportion Signing with Marks of Total Persons Married.			
Year.		Males.		Females.		Total.	
		Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1861	..	18.50	30.69	24.60	1901	..	1.35
1871	..	10.58	16.40	13.49	1911	..	0.56
1881	..	4.34	6.78	5.56	1921	..	0.16
1891	..	2.27	2.40	2.34			0.18
							0.17

The table shows that there has been a large diminution in illiteracy, and judging from the figures for the last few years the proportion bids fair to practically disappear. Up to 1891 there was a higher proportion of illiteracy amongst females, but during the later years the rates have been very even.

### § 9. Miscellaneous.

1. *Scientific Societies.*—(i) *Royal Societies.* Despite the trials and struggles incidental to the earlier years of the history of Australia, higher education and scientific advancement were not lost sight of. Thus the origin of the Royal Society dates as far back as 1821, when it was founded under the name of the Philosophical Society of Australasia, Sir Thomas Brisbane being its first president. Scientific work was fitfully carried on by means of a Society whose name varied as the years rolled on. It was called the Australian Philosophic Society in 1850. In 1856 the old Australian Society merged into a resuscitated Philosophical Society of New South Wales, and its papers were published up to 1859 in the Sydney Magazine of Science and Art (2 vols., 1858-9). Its present title dates from 1866. Some of the papers of the old Philosophical Society were published in 1825 under the title of "Geographical Memoirs of New South Wales" (Barron Field), and contain much that is interesting in regard to the early history of Australia. One volume containing the Transactions of the Philosophical Society of New South Wales (1862-65) was published in 1866. The journal of the Society did not begin to bear a serial number, however (vol. 1), until the year 1867. "Transactions of the Royal Society of New South Wales" were issued in 1867, the title of the series being altered to "Journal" in 1878. Up to the end of 1922, 56 volumes had been published. The exchange list comprises the names of 332 kindred societies. At the present time the library contains over 30,000 volumes and pamphlets, valued at about £3,600. Income and expenditure for the year ended 31st March, 1923, were £1,701 and £1,852 respectively, and the Society had on the same date 372 members.

The Royal Society of Victoria dates from 1854, in which year the Victorian Institute for the Advancement of Science and the Philosophical Society of Victoria were founded. These were amalgamated in the following year under the title of the Philosophical Institute of Victoria, whilst the Society received its present title in 1860. The first volume of its publications dates from 1855. Up to 1922, 67 volumes of proceedings had been issued. The Society exchanges with 235 kindred bodies. The constitution of the Society states that it was founded "for the promotion of art, literature, and science," but for many years past science has monopolized its energies. The library contains over 14,500 volumes, valued approximately at £3,800. Income for the year 1922 amounted to £503, and expenditure to £510. There are 190 members on the roll.

The inaugural meeting of the Royal Society of Queensland was held on the 8th January, 1884, under the presidency of the late Sir A. C. Gregory. The Society was formed "for the furtherance of the natural and applied sciences, especially by means of original research." Shortly after its formation it received an addition to its ranks by the amalgamation with it of the Queensland Philosophical Society, which was started at the time when Queensland became a separate colony. At the end of 1922 the members numbered 105; publications issued, 34 volumes; library, 7,000 volumes; societies on exchange list, 200. Income and expenditure in 1922 amounted to £270 and £250 respectively.

The present Royal Society of South Australia grew out of the Adelaide Philosophical Society, which was founded in 1853, its object being the discussion of all subjects connected with science, literature and art. Despite this programme, the tendency of the papers was distinctly scientific, or of a practical or industrial nature. With the advent of the late Professor Tate the Society became purely scientific. Permission to assume the title of "Royal" was obtained in 1879, the Society thenceforward being known as "The Royal Society of South Australia." In 1903 the society was incorporated. In 1922 the number of members was 101. The income for the year 1922 was £621, and expenditure £378. Up to 1922 the Society had issued 46 volumes of proceedings and 8 parts

of memoirs, exclusive of several individual papers published in earlier years. The exchange list numbers about 230, while the library contains 4,000 volumes and over 1,850 pamphlets.

Permission to assume the title of Royal Society was granted to the Natural History and Science Society of Western Australia in March, 1914. This Society has grown out of the Mueller Botanic Society, founded in July, 1897. The objects of the Society are the study of natural history and pure science, promoted by periodical meetings and field excursions, the maintenance of a library, and issue of reports of proceedings. It numbers at present 153 members, whose subscriptions form its main source of revenue, the income and expenditure in 1921-22 being each £112. Five volumes of proceedings were issued as Journal of the Natural History and Science Society of Western Australia, and nine as of the Royal Society. Its publications are exchanged with 75 institutions at home and abroad. The library contains 200 volumes, besides 650 unbound journals, pamphlets, etc.

The Royal Society of Tasmania (the first Royal Society outside the United Kingdom) was inaugurated by Sir Eardley Wilmot, Lieutenant-Governor of Van Diemen's Land, on the 14th October, 1843. It may be mentioned, however, that a scientific society had been formed as far back as 1838 under the presidency of Sir John Franklin, then Governor of the colony, and in 1841 the number of resident members was 31, and corresponding members, 38. The meetings of this parent society were held at Government House, and three volumes of proceedings were issued. A large portion of the Colonial Gardens, together with a grant of £400, was given to the Society. A library and museum were established in 1848. In 1885 the museum and gardens were given back to the State, the Society being granted room in the museum for its library and meetings. The names of Captains Ross and Crozier, of H.M.S. *Erebus* and *Terror*, appear in the list of the first corresponding members. The Society, which, since 1844, has published 62 annual volumes of proceedings, possesses 243 members, 12 corresponding members, 9 life members, exchanges with 225 kindred bodies, and has a library containing 13,000 volumes, in addition to manuscripts, etc., valued at over £10,000. Income for the year 1922 was £367, and expenditure £365.

(ii) *Other Scientific Societies.* The Australasian Association for the Advancement of Science, founded in 1888, has its head-quarters in Sydney. It meets usually in each State biennially in turn. Its receipts at latest available date were about £14,000, including Government aid to the amount of £4,000. The library contains 4,000 volumes and parts valued at £400. Up to 1921, 14 volumes of proceedings have been issued. The exchange list numbers about 140.

The Linnean Society of New South Wales, with head-quarters in Sydney, was founded in 1875. The soundness of its present position is due to the benefactions of Sir William Macleay, who during his lifetime and by his will endowed the Society to the amount of £67,000, which has been increased by judicious investment to nearly £80,000. Income for the year 1922 amounted to £4,721 and expenses to £4,412, including £2,314 for research purposes. The Society maintains a research bacteriologist, and offers annually 4 research fellowships in various branches of natural history. The library comprises some 12,000 volumes, valued at about £6,000. Forty-seven volumes of proceedings have been issued, and the Society exchanges with some 175 kindred institutions. The ordinary membership at the end of 1922 was 158.

The British Astronomical Society has a branch in Sydney, and in some of the States the British Medical Association has branches.

The Chemical Society of Western Australia was founded in 1915, for the promotion of the study of Chemistry and the furtherance of the interests of professional chemists. Meetings are held monthly. There is a council consisting of seven members.

In addition to the societies enumerated above—there are various others in each State devoted to branches of scientific investigation, particulars respecting which are not at present available.

2. *Public Libraries.*—In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favourably



with similar institutions elsewhere. The following statement gives the number of volumes in the Public Library of each capital city :—

#### METROPOLITAN PUBLIC LIBRARIES, 1921.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Sydney .. .. .	(a)314,425	(b) .. .. .	41,579	356,004
Melbourne .. .. .	282,103	39,017	.. .. .	321,120
Brisbane .. .. .	43,265	.. .. .	.. .. .	43,265
Adelaide .. .. .	114,753	38,889	.. .. .	153,642
Perth .. .. .	114,269	.. .. .	15,271	129,540
Hobart .. .. .	22,702	.. .. .	.. .. .	22,702

(a) Including 107,021 volumes in the Mitchell Library.

(b) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. At the end of December, 1921, the books numbered 37,964.

Amongst other important libraries in New South Wales may be mentioned the "Fisher" Library at Sydney University with 131,500 volumes; the library at the Australian Museum, 23,198; the Teachers' College library, 19,330; Sydney Technical College library, 11,500; and the library at the Botanic Gardens, 7,900. Libraries attached to the various State Schools possessed nearly 357,000 volumes in 1921. During this year the Public Library authorities inaugurated the system of lending boxes of children's books to country schools, and 120 of these children's travelling libraries are now in circulation. Boxes are forwarded to out-back schools distant from towns. Each box contains about 40 books, and is lent for a period of four months, and then exchanged for another collection, the Library Trustees defraying the cost of carriage both ways.

A special research staff attached to the Public Library gives valuable assistance in making readily available to inquirers the store of information contained in books, etc., which, owing to limitations of space, are not in open access.

The Mitchell Library in Sydney consisted of over 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia, valued at £100,000, and bequeathed in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testator stipulated that the regulations of the British Museum were to be adopted as far as practicable, hence the library is the resort of specialists. There are now about 107,000 volumes in the library. During 1917 the Mitchell Library was further enriched by a donation of 3,676 printed volumes, 117 volumes of manuscript, and 235 pamphlets from the working library of the late John Tebbutt, of Windsor, the well-known astronomer. A very fine collection of New South Wales postage and fiscal stamps, estimated by philatelists to be worth at least £20,000, was presented to the trustees by Mr. H. L. White, of Belltrees, near Scone, in June of the same year. In 1921 this gift was supplemented by the presentation of a very fine collection of Queensland and Western Australian stamps, also valued by experts at about £20,000.

The reading room at the Melbourne Public Library ranks among the finest in the world. It was opened in 1913, and has a diameter of 114 feet, with a similar height, and is capable of seating 320 readers at a time, all of whom are under efficient supervision from the centre of the room.

The library at Brisbane (South) contained over 13,000 volumes at the end of 1921.

For some years past efforts have been made in South Australia to collect original documents likely to be of service in compiling a history of the State. So far back as 1914 Professor Henderson, of Adelaide University, under commission from the South Australian Government, visited and reported on the system of keeping archives in England, France, Belgium, Holland, and Ceylon, and obtained valuable information also from the United States and Canada. A department of historical documents has been created under the care of an archivist, and valuable preliminary work done in

connexion with examination, classification, and permanent preservation of the available papers. A suitable building for housing the documents and the staff was provided in 1921. The archives contain 159,573 documents, 3,775 photographs, and 110 maps.

The cost of construction of the Public Library building in Western Australia to the 30th June, 1922, was about £27,000.

The library at Launceston, in Tasmania, contains 30,000 volumes.

Mention may be made here of the free library attached to the Commonwealth Patents Office, which contains over 10,000 volumes, including literature dealing with patents in the principal countries of the world.

Statistics in regard to libraries generally are not available for all States, while the information supplied is not in all cases complete. Returns for Victoria in 1921 showed a total of 460 libraries in receipt of State or municipal aid, containing 1,203,500 books; Queensland returned 206 libraries with 398,000 books; South Australia, 225 libraries and 750,000 books; Western Australia, 263 libraries and 278,000 books; Tasmania, 22 libraries and 107,000 books.

**3. Public Museums.**—The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing a fine collection of the usual objects to be met with in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building was £79,000. The number of visitors to the institution in 1921 was 225,000, and the average attendance on week-days 598, and on Sundays 1,271. The expenditure for 1921 amounted to £13,976. A valuable library containing about 23,000 volumes is attached to the Museum. Representative collections, illustrative of the natural wealth of the country, are to be found in the Agricultural and Forestry Museum, and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids in country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, and the Museum of Normal and Morbid Anatomy, connected with the University, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are all accessible to the public. There is a fine Technological Museum in Sydney, with branches in five country centres. Valuable research work has been performed by the scientific staff in connexion with oil and other products of the eucalyptus and essential oils of other native vegetation. The number of visitors to the Technological Museums during 1921 was about 175,000.

The National Museum at Melbourne, devoted to Natural History, Geology, and Ethnology, is located in the Public Library Building. The National Art Gallery is situated in the same building. The Industrial and Technological Museum, also housed under the same roof, contains over 9,000 exhibits. Cost of construction for the combined institutions is set down at £327,000. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the Schools of Mines in the chief mining districts.

The Queensland Museum dates from the year 1871, but the present building was opened in January, 1901. Since its inauguration the Government has expended on the institution a sum of £103,301, of which buildings absorbed £20,533, purchases £29,714, and salaries £53,049. The number of visitors during the year was 92,825, of whom 37,000 visited the institution on Sundays. The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

Under the Public Library Act of 1884 the South Australian Institute ceased to exist and the books contained therein were divided amongst the Museum, Public Library, and Art Gallery of South Australia, and the Adelaide Circulating Library. The Museum was attended by 86,000 visitors in 1921. Cost of construction of the Museum building was returned as £65,000.

The latest available returns show that the Western Australian Museum contains altogether 94,000 specimens, of an estimated value of £80,000. The Museum is housed in the same building as the Art Gallery, and the visitors to the combined institutions

during the year reached 77,000. Cost of construction of the building amounted to £45,800. The expenditure for the year 1921-22 was £6,178, and the Government grants for the year amounted to £6,000, the figures in each case including returns for the Public Library.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral, and miscellaneous products. The Tasmanian Museum received aid from the Government during 1921 to the extent of £1,250. The Hobart institution cost £9,500 to construct, and that at Launceston £6,000.

4. **Public Art Galleries.**—The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £94,000. At the end of 1921 its contents, which are valued at £162,000, comprised 497 oil paintings, 461 water colours, 747 black and white, 177 statuary and bronzes, and 475 ceramics, works in metal and miscellaneous. During 1921 the average attendance on week days was 480, and on Sundays 1,418.

The National Gallery at Melbourne at the end of 1921 contained 634 oil paintings, 5,015 objects of statuary, bronzes and ceramics, and 14,448 water colour drawings, engravings, and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £327,000. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. The Art Gallery at Ballarat contains 227 oil paintings, 174 water colours, and 48 statuary bronzes, etc., while there are some valuable works of art in the smaller galleries at Bendigo, Castlemaine, Geelong, and Warrnambool.

The Queensland National Art Gallery, situated in the Executive Buildings, Brisbane, was founded in 1895, and contains a small, but well chosen collection of pictures. At the end of 1921 there were on view 102 oil paintings, 26 water colours, 135 black and white, and 31 pieces of statuary, together with various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £11,000. Visitors during the year averaged 148 on Sundays and 114 on week days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the gallery to rapidly outgrow the accommodation provided for it in 1889 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir T. Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and of £3,000 in 1907 from Mr. David Murray. At the 30th June, 1921, there were in the Gallery 243 oil paintings, 79 water colours, and 24 statuary. Building and site are valued at upwards of £31,000. Visitors during the year 1921 numbered 87,000. The cost of construction of the Art Gallery amounted to £22,000.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and, as is the case in Melbourne, the Public Library, Museum, and Art Gallery are all situated in the one structure. The collection comprises 107 oil paintings, 53 water colours, 256 black and white, 275 statuary, and various ceramic and other art objects. It is estimated that the collections in the Gallery possess a value of about £14,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. Its present contents consist of 70 oil paintings, 93 water colours, 11 black and white, and 175 etchings, engravings, etc., the value of the contents being estimated at £6,500.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belong to the gallery, the bulk of the pictures being obtained on loan. At latest date there were on view 95 oil paintings, 20 water colours, and miscellaneous exhibits, the whole being valued at £10,000.

5. State Expenditure on all Forms of Educational Effort.—The expenditure from the Consolidated Revenue in each State and Territory on all forms of educational and scientific activity during each of the last five financial years was as follows :—

## EXPENDITURE ON EDUCATION, SCIENCE, AND ART, 1917-18 TO 1921-22.

State or Territory.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
New South Wales .. { Total £	1,968,366	2,139,541	2,359,900	3,737,960	3,736,294
Per head	20/6	21/9	23/1	35/8	35/1
Victoria .. { Total £	1,227,629	1,248,994	1,474,877	1,847,184	1,955,036
Per head	17/4	17/5	19/7	24/2	25/2
Queensland .. { Total £	827,332	892,992	1,103,334	1,350,399	1,362,197
Per head	24/1	25/4	29/11	35/11	35/5
South Australia .. { Total £	397,210	428,519	487,609	607,160	627,075
Per head	17/9	18/9	20/3	24/9	25/0
Western Australia.. { Total £	397,661	407,822	460,384	543,356	596,518
Per head	25/11	26/4	28/1	32/10	35/7
Tasmania .. { Total £	140,766	158,501	179,871	263,524	281,677
Per head	14/3	15/7	17/1	24/9	25/10
Northern Territory { Total £	2,479	2,676	2,467	4,291	4,860
Per head	10/3	11/6	10/10	21/6	26/0
Commonwealth { Total £	4,961,443	5,279,045	6,068,442	8,353,874	8,563,657
Per head	19/11	20/9	22/11	30/10	31/1

The comparatively heavy increases during the last five years are partly due to the expanding provision for State-aided education, to greater cost of building, equipment, and maintenance, and, in the later years, to increases in teachers' salaries and allowances.